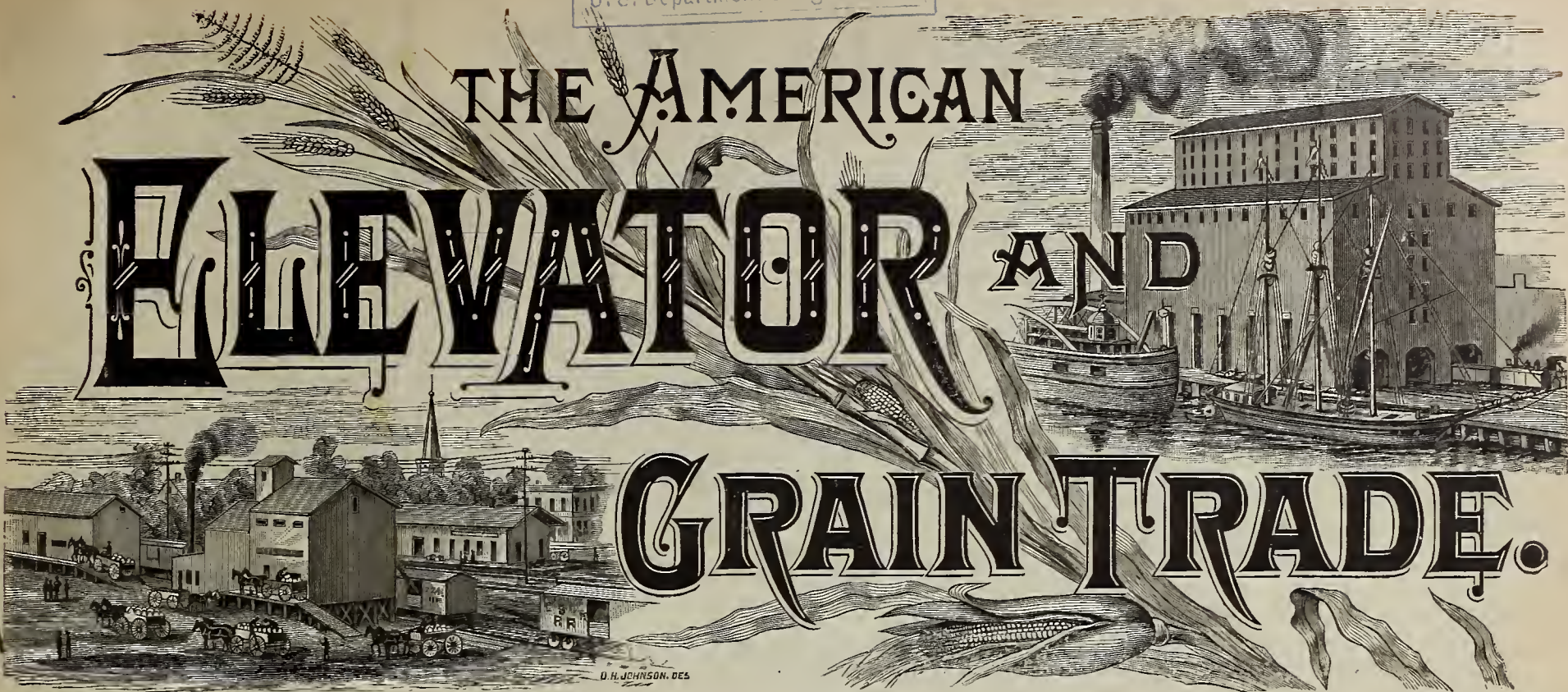


Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

LIBRARY.
RECEIVED
★ OCT 19 1897 ★
U. S. Department of Agriculture.



Entered at the Post Office at Chicago, Ill., for transmission through the mails at second-class rates.

A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

Vol. XVI.

CHICAGO, ILLINOIS, OCTOBER 15, 1897.

No. 4.

ONE DOLLAR PER ANNUM.
SINGLE COPY, TEN CENTS.

Excelsior Grain-Cleaning Machinery

CONSISTING OF THE

EXCELSIOR Dustless Warehouse and Elevator Separator,
EXCELSIOR Oat Clipper, EXCELSIOR Separator and Grader,
EXCELSIOR "Combined Grain Machine."

ALSO

PEASE DUSTLESS SEPARATORS and WAREHOUSE FANNING MILLS,
POWER CAR PULLERS, GASOLINE ENGINES, STEAM ENGINES, HORSE POWERS
POWER TRANSMISSION MACHINERY,
GENERAL MILL AND ELEVATOR SUPPLIES.

E. H. PEASE MFG. CO., RACINE, WISCONSIN.

ADDRESS

Headquarters for
SHAFTING, HANGERS, PULLEYS,
GEARS, SPROCKET WHEELS,
"Sweep" and "Treed" Horse Powers,
Elevator "Boots," "Heeds," "Buckets,"
FEED GRINDERS,
Special Flex Mills; Single, Double and
Quadruple Flax Reels.
..... BELTING
"Platform," "Hopper" and "Dump"
Scales, Flexible Loading Spouts.
Corn Shellers, all kinds of FITTINGS,
SUPPLIES and MACHINERY for
Elevators and Mills.
Elevator Equipments a Specialty.

GALDWELL
CONVEYOR
HORSE POWERS
WIRE ROPE
BELT TIGHTENERS

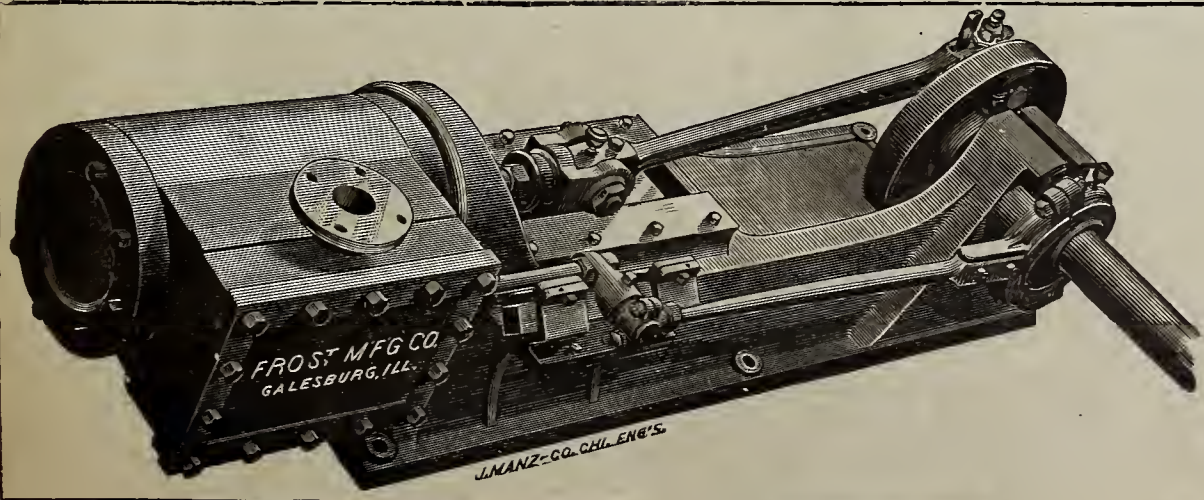
MILL AND ELEVATOR MACHINERY
ELEVATOR BOOTS
ELEVATOR BUCKETS
ELEVATOR BOLTS
BELTING AND ROPE TRANSMISSION
SHEAVE WHEELS
SHAFTING, HANGERS
SPROCKET WHEELS



SEND FOR CATALOGUE

THORNBURGH-
CREEL CO.,

245-247 S. Jefferson St.,
CHICAGO, ILL.



FOR PRICES AND DISCOUNTS
—ON—
Elevator Machinery
AND SUPPLIES
—OF—

Every Description,

EITHER STEAM OR HORSE-POWER,

ADDRESS

**THE FROST MFG. CO.,
GALESBURG, ILL.**

THE PAINE-ELLIS GRAIN DRIER

Several Patents Pending. \$50 Reward for First Notice of Infringement.

NOTE THESE RESULTS:

No grade corn containing .07½ per ct. excess dampness dried and ventilated in 55 minutes. No grade wheat containing .07½ per ct. excess dampness dried and ventilated in 60 minutes.

A GRAIN DRIER THAT WILL DRY.

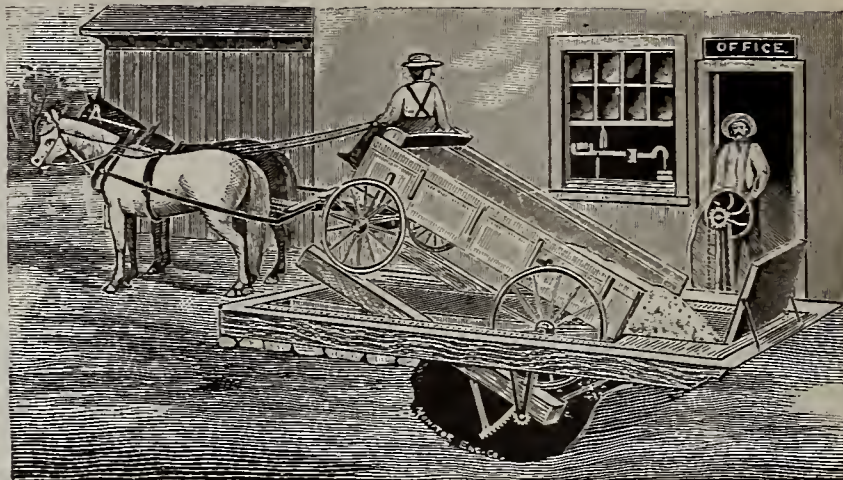
OUR apparatus consists of a drying box or bin with alternate grain and air spaces arranged perpendicularly, and a steam coil and fan for driving hot and then cold air through the grain. Must and other odors are almost entirely eliminated by this process. The drier as well as the fan and steam coil are self-contained so that the entire apparatus can easily be set up and connected with a steam plant. We are prepared to furnish driers of 50, 100 and 200 bushels' capacity, and as they can, as a rule, be filled and emptied hourly, their capacity ranges from 1,200 to 4,800 bushels of dry grain in twenty-four hours. Larger driers will be constructed when required. The steam power required is about ten horse to every hundred bushels' capacity.

We will sell the apparatus at the cost of construction and charge a royalty for its operation; or will retain ownership and charge an increased royalty.

Every country elevator should be equipped with one of these driers so that grain may be sent to market in safe and salable condition. For terms and further information write

PAINE-ELLIS GRAIN DRIER COMPANY,
28 Chamber of Commerce, Milwaukee, Wis.

Gold Dollars



At FIFTY CENTS apiece are CHEAP, but they do not represent a better investment than we offer the "elevator and grain trade" in our

Controllable Wagon Dump.

WINCHESTER, ILL., February 4, 1896.

MESSRS. SAVAGE & LOVE CO., Rockford, Ill.

GENTLEMEN:—Your favor of the 28th ult. received and noted. Last July I put one of your Controllable Wagon Dumps in a Fairbanks, Morse & Co.'s 22-ft. scale, and it has given me entire satisfaction in every respect. In this locality the bulk of grain is as yet handled in sacks, and by tipping the Dump about one-half it makes a nice slant, making it very easy to pull the sacks to back end of wagon, where strings are cut and grain runs out into bin below. Every farmer, without exception, speaks in glowing terms of the merits of this Dump. In unloading loose grain from wagon there is no dump that will equal yours in being easily handled and always under control of operator. No scaring horses, no dropping of wagon and no noise. I consider a grain elevator incomplete without the Savage & Love Controllable Wagon Dumps.

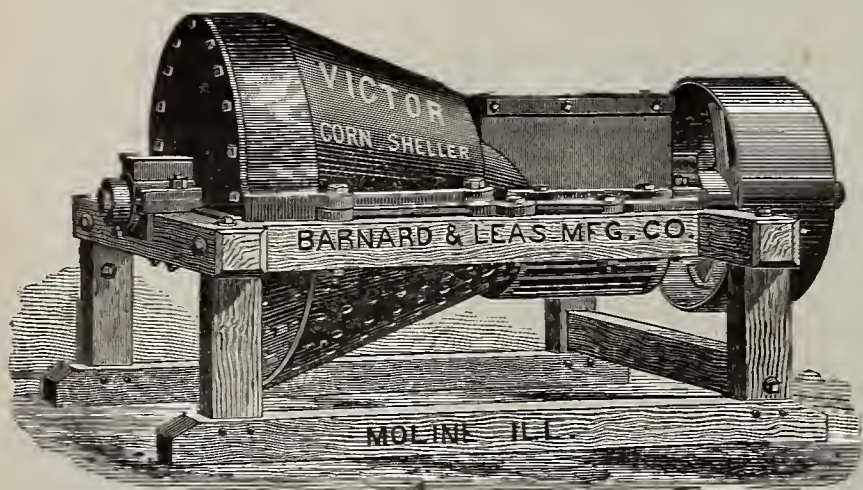
Yours truly,
M. C. WOODWORTH.

MANUFACTURED ONLY BY

THE SAVAGE & LOVE CO., Rockford, Ill.

FAIRBANKS, MORSE & CO., St. Paul, Minn., Northwestern Agents.

CORN, CORN, CORN.



Barnard's New Horizontal Adjustable Warehouse Scourer

IS THE BEST SCOURER IN USE.

Of Large Capacity. It is also the Best Oat Clipper in Use.

Write for further information to

BARNARD & LEAS MFG. CO., MOLINE, ILL.

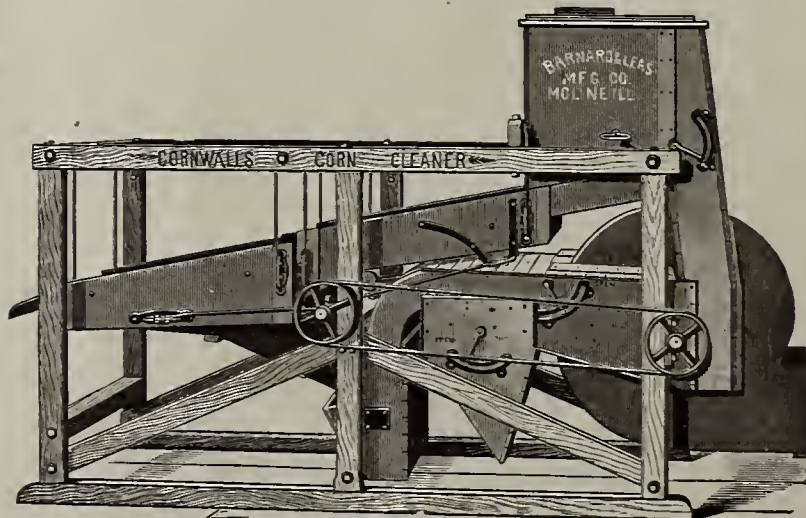
The best outfit for shelling it is the

VICTOR SHELLER,

And the best cleaner the

CORNWALL CORN CLEANER.

We guarantee them to clean the corn for market cleaner than any other outfit on earth.





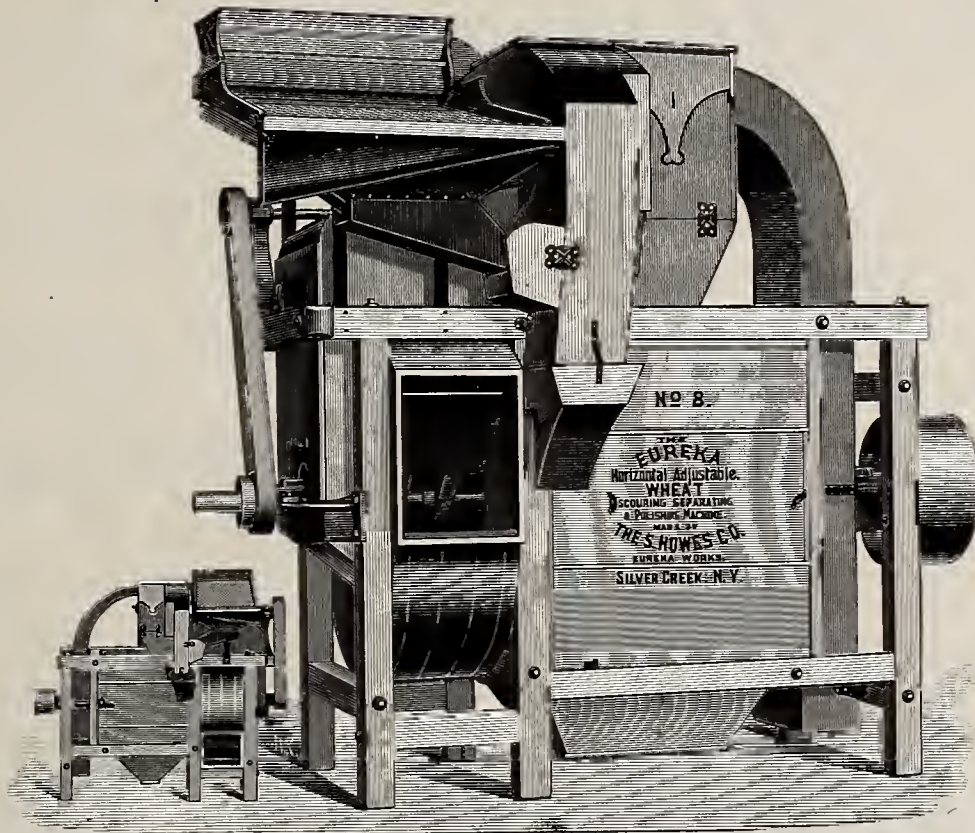
THE "Eureka" Special Horizontal Close Scourer

Is specially adapted for handling

GROWN OR SMUTTY WHEAT.

A large number have been sold for this purpose and are giving the best of satisfaction.

Built in Nine Sizes—Capacities from 5 Bus. to 1,000 Bus. per Hour.



SEE WHAT TWO USERS SAY FOR THEM:

R. D. SNEATH.

A. A. CUNNINGHAM.

SNEATH & CUNNINGHAM,
GRAIN AND SEEDS.

THE S. HOWES CO., Tiffin, Ohio, Oct. 5, 1896.
Silver Creek, N. Y.

Dear Sirs: Your favor of the 3d received and noted. We enclose you our check for \$—, in payment of your No. 2½ Eureka Close Scourer, which we bought of you for handling grown wheat. It is giving the best of satisfaction. In fact, we could not get along without it this season.

Wishing you the best of success, as your machine deserves, we are,
Yours, SNEATH & CUNNINGHAM.

S. J. BROWN,

BUYER AND SHIPPER OF GRAIN.

THE S. HOWES CO., Liberty, Neb., Sept. 30, 1896.
Silver Creek, N. Y.

Dear Sirs: Some time ago I wrote you about my No. 4 Eureka Oat Clipper. The little difficulty I had with it was overcome before I got your reply. It is one of the finest machines I have ever had anything to do with. It has made me one thousand dollars this season on leggy or grown wheat. It does the work in the best possible manner, and with one operation. It raises the grade and weight of the wheat to our entire satisfaction. Anyone having trouble this season with leggy or grown wheat can add nothing to their elevator or mill that will give them as good satisfaction as your EUREKA machines. Yours very truly, S. J. BROWN.

For particulars of this machine, as well as the best Warehouse and Elevator Separators on earth, write

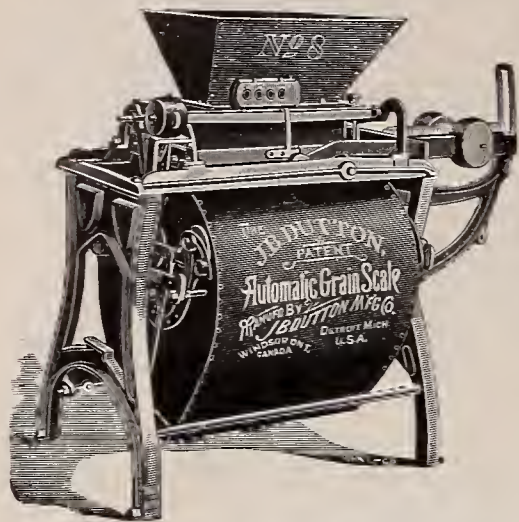
The S. Howes Co.,

"Eureka Works," Silver Creek, N. Y.

Successors to Howes, Babcock & Co., Howes, Babcock & Ewell, Howes & Ewell, S. Howes,

ESTABLISHED 1856.





J. B. DUTTON'S Patent Automatic Grain Scale.

FOR USE IN

ELEVATORS, DISTILLERIES, MALT HOUSES, FLOUR MILLS, ETC.

ACCURATE AND RELIABLE AT ALL TIMES. SCALES SENT ON 30 DAYS' TRIAL.
SEND FOR CIRCULAR AND PRICE LIST.

Address

J. B. DUTTON, 1026 and 1028 Scotten Ave., DETROIT, MICH.

The Grainman's Actuary.

Showing at a glance the cost of from 1 to 50,000 bushels at any price from 1-8 of a cent to \$1.00 a bushel. Prices run through the books in an indexed form; can find any price and amount quickly. It also shows at a glance the cost of fractional parts of bushels at the following prices:

**WHEAT FROM 40c TO \$1.00 PER BUSHEL.
EAR CORN FROM 10c TO 50c PER BUSHEL.**

**SHELLED CORN FROM 10c TO 50c PER BUSHEL.
OATS FROM 10c TO 40c PER BUSHEL.**

IT IS THE MOST COMPLETE, ACCURATE AND CONVENIENT BOOK EVER ISSUED.
ITS USE WILL SAVE TIME AND LABOR AND INSURE ACCURACY.

BALTIMORE, April 26, 1897.

Mr. HENRY NOBBE, Farmersville, Ill.:

DEAR SIR:—Your esteemed favor of the 23d to hand and noted. Accept thanks for the supplement furnished us. We find your Actuary all it has been represented to be. It is a great time saver, is accurate and correct in every particular and is indispensable to everyone connected with the grain business, and we take pleasure in recommending its use. Yours truly,
KIRWAN BROS. GRAIN CO.

HUTCHINSON, KAN., April 26, 1897.

HENRY NOBBE, Esq., Farmersville, Ill.:

DEAR SIR:—We have received your Actuary, and after care-

ful examination of its merits we find it a very valuable work and can recommend it to all grain buyers. Yours respectfully,
W. L. WOODNUT & CO.

DECATUR, ILL., April 29, 1897.

Mr. HENRY NOBBE, Farmersville, Ill.:

DEAR SIR:—Your favor of the 23d received inclosing supplement to the Actuary, for which accept our thanks. In regard to the "Actuary" will say we are very much pleased with it, and think every grain dealer should have one in his office, as it saves time and time is money. Yours truly,
DECATUR MILLING CO.

WINONA, MINN., April 24, 1897.

HENRY NOBBE, Esq., Farmersville, Ill.:

DEAR SIR:—We have used your Grainman's Actuary for some time past and find same satisfactory in every way. It is a great convenience in our office and saves labor and time. Yours truly,
WINONA & DAKOTA GRAIN CO.

NEW YORK, April 29, 1897.

Mr. HENRY NOBBE:

DEAR SIR:—We find your Grainman's Actuary of benefit in checking up invoices, inasmuch as time is saved, and accuracy insured. Yours,
CLARK & ALLEN,
Per B. D. Kennedy.

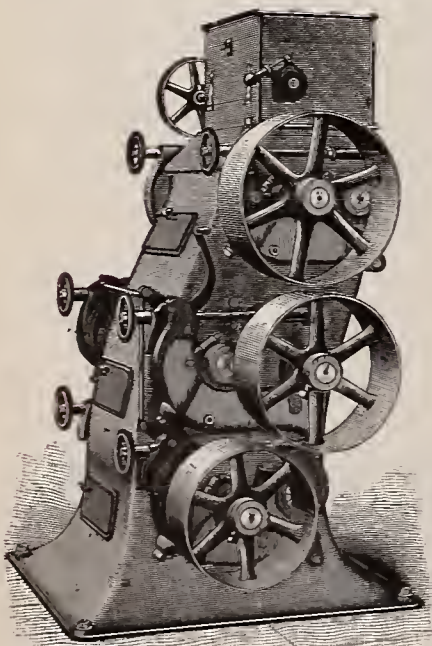
Size of book 4½x7½; 214 pages, fine cloth back, good paper and well bound. Copyrighted. Price reduced to \$1.00 per copy. Mailed on receipt of price. Will send you the book for inspection on request, to be returned to me if not satisfactory. Address all communications to

HENRY NOBBE, GRAIN DEALER AND PUBLISHER,
Farmersville, Illinois.

NORDYKE & MARMON CO., Indianapolis, Ind., FLOUR, CORN AND ELEVATOR MACHINERY.

QUALITY TO SUIT THE MOST EXACTING,

PRICES TO SUIT THE TIMES.

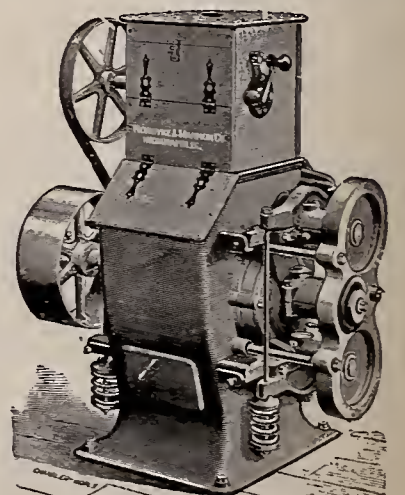


Three Pair High Six Roller Mill.

Corn Shellers,
Grain Cleaners,
Flour and Bran Packers,
Flour Feeders and Mixers,
Portable Buhr Mills,
Hominy Mills,
Wheat Heaters,
Scales,
Shafting,
Pulleys,

Elevator Supplies.

Hangers,
Boxes,
Gearing
Belting,
Steel Conveyors,
Wood Conveyors,
Link Belt,
Sprocket Wheels,
Engines and Boilers,
Water Wheels,



Three Roll Two-Break Corn and Feed Mill.

TEN SIZES and STYLES of ROLLER, CORN and FEED MILLS

No doubt about the volume of our voice if price and merit talk, and what we say will be interesting if you intend to buy.

WRITE US, SAYING WHAT YOU WANT.

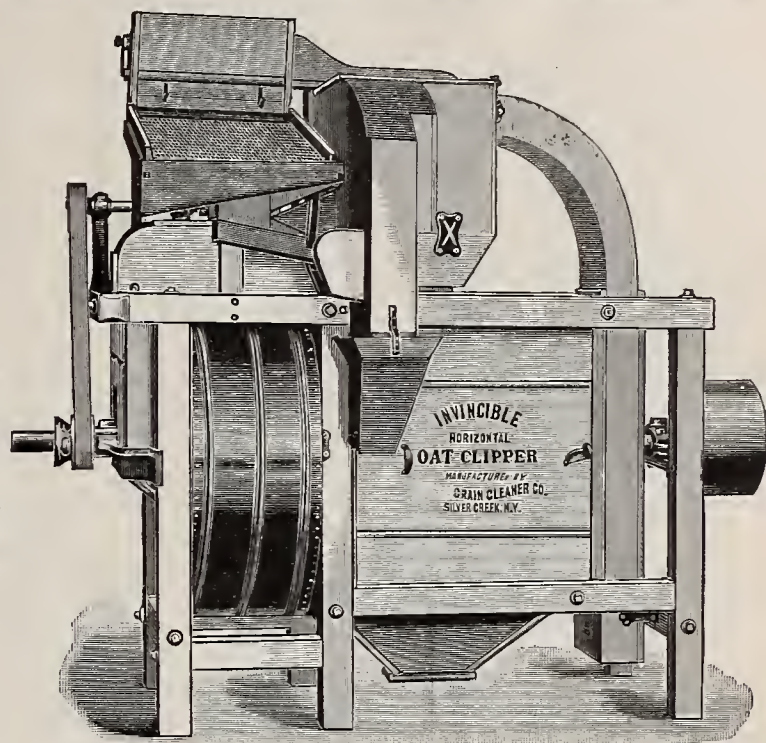
NORDYKE & MARMON CO., - INDIANAPOLIS, IND.

The Invincible Oat Clipper

It is the strongest and best constructed machine on the market. Will do more and better work with the least waste than any other. It contains many important features not found in any other clipper. It has been adopted by some of the most progressive handlers of oats and is pronounced by them superior to any other machine they have ever used.

By our PATENTED PROCESS of introducing air to the cylinder we remove instantly all loosened impurities and there is no chance for the dirt and stuff to lodge and choke.

If interested, we shall be pleased to supply you with a list of users. If you adopt the INVINCIBLE Oat Clipper you will have no trouble. WE POSITIVELY GUARANTEE IT THE BEST MADE and that you will get the best results from its use.



Invincible Grain Cleaner Co., INVINCIBLE WORKS, SILVER CREEK, N. Y.

Remember that we make Separators, the best in the market.

James L. Wheeler, Agent, Gore's Hotel, Chicago, Ill.



Corrugated Sheet Metal

For Roofing and Siding Factories,
Warehouses, Coal Sheds,
Wharves, Stations, Grain Elevators,
Blast Furnaces, Houses & Barns.

THE
Cincinnati Corrugating Co.
Box 369 PIQUA, OHIO.

BISULPHIDE OF CARBON,

Of Special Grade for Killing Insects in Warehouses, Etc.

Send for Instructions and Order Direct from
the Manufacturer,

EDWARD R. TAYLOR,
CLEVELAND, OHIO.



Also Roofing, Steel and Iron, all Styles.
Ark Brand and Rubberoid Prepared
Roofing, Building Paper, Etc.
HIGH GRADE GOODS ARE OUR SPECIALTY.
Kansas City Roofing & Corrugating Co.,
KANSAS CITY, MO.

UP TO DATE Steam Engines For Grain Elevators.

Simplest, Cheapest, Best.

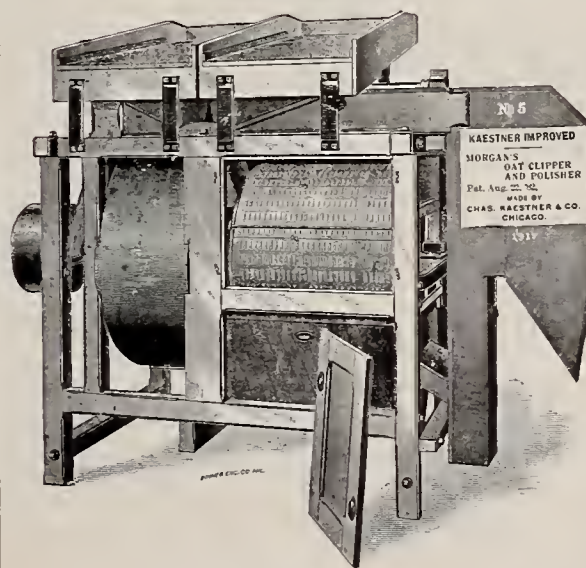
Write for Catalogue and Prices.

RICHMOND BROS.,

Engine Builders,
ST. JOHNS, MICH.

THE KAESTNER Morgan Improved Oat Clipper.

OVER 1,000 IN ACTUAL USE BY THE LARGEST CLIPPERS IN THE WORLD.



"No machine so good
as the

MORGAN"

Is what over 1,000 users
of the "Kaestner Im-
proved Morgan Oat Clip-
per" say of it.

Can you make a
mistake in buying
the "*Morgan*" after
such evidence?

WE CLAIM for this machine that it will clip more oats with less power, and do more even and better work, than any other Oat Clipper on the market.

WE CAN SUBSTANTIATE THIS CLAIM.

We also build the Kaestner-Morgan Improved for scouring Wheat, Barley and other Grains, and a special machine for handling Malt Barley. Write us what you want to do, stating desired capacity, and machines will be built to suit the work.

Chas. Kaestner & Co.,

ENGINEERS, FOUNDERS AND MACHINISTS, . . .

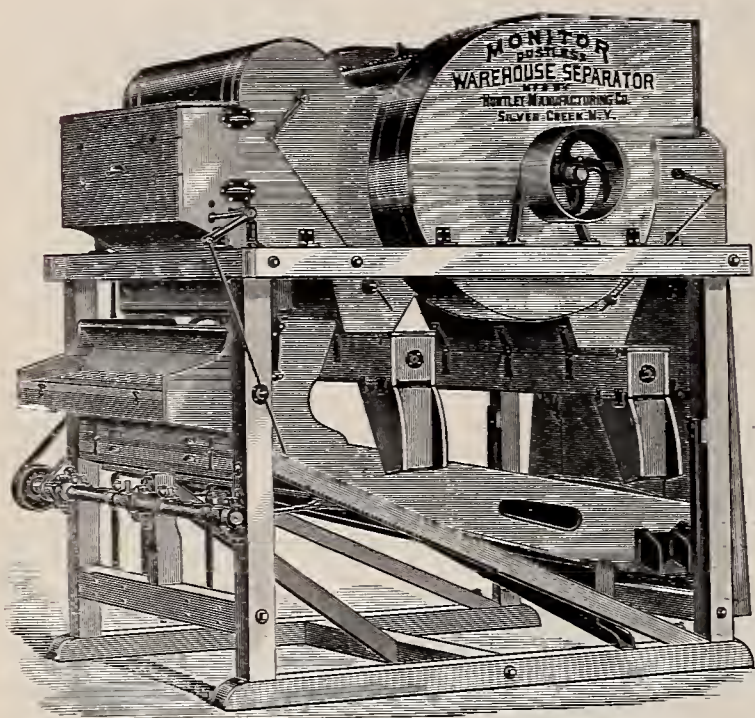
. . . MANUFACTURERS OF POWER TRANSMISSION MACHINERY,

241-269 South Jefferson St., - - CHICAGO, ILL.

STANDARD THE WORLD OVER.

Monitor Grain Cleaners, Monitor Oat Clippers.

THERE ARE MORE MONITOR MACHINES IN USE, IN THE LEADING MODERN CLEANING ELEVATORS, THAN ALL OTHER MAKES COMBINED.

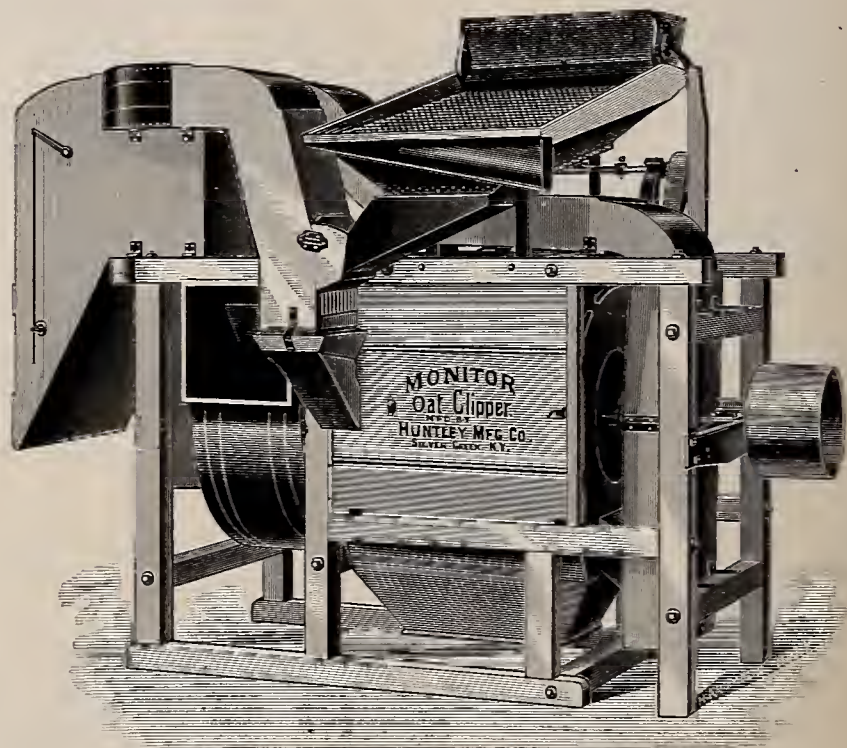


During the last six years all of the leading elevators built in the United States, with but two exceptions, adopted the "Monitor."

COMMENT IS UNNECESSARY.

THE MONITOR OAT CLIPPERS have taken their proper place—at the head.

The best constructed clipper made. More capacity and better work than any other. HIGH GRADE IN EVERY RESPECT.



HUNTLEY MFG. CO.

Silver Creek, N. Y.



A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. XVI.

CHICAGO, ILLINOIS, OCTOBER 15, 1897.

No. 4.

{ ONE DOLLAR PER ANNUM
SINGLE COPY, TEN CENTS.

A. B. COHEE & CO.'S ELEVATOR AT BRINGHURST, IND.

Indiana has many regular grain dealers, who have up-to-date facilities for handling grain, and ample storage capacity to accommodate farmers who desire to store their grain, and it is a great wonder they have not organized a state association to protect their properties and their businesses long ago. The transient buyer and the grain shipping farmer receive the same consideration from the railroads as the man who rents ground from the railroad company, provides, at his own expense, a freight depot for bulk grain, and devotes his entire time to seeking grain for shipment over the line which is so considerate as to lease him ground for an elevator and then loan its cars for the warehousing of grain by the elevator man's competitors. The elevator man pays taxes in Indiana also, but the municipal governments make no attempt to protect him from the unfair competition with irregular dealers who pay nothing toward the support of the local government.

In spite of the discrimination against them, the elevator men of Indiana build and maintain modern houses. The elevator illustrated herewith is located at Bringhurst, in Carroll County—a place of about 400 population, on the Terre Haute & Logansport division of the St. Louis, Vandalia & Terre Haute R. R. The main house is 24x42 feet, and has 20,000 bushels' capacity. It has white pine siding and a metal roof. On the north side of the elevator are four studded bins 8x12 feet and 39 feet deep. Above the working floor are three hanging bins 10x12 feet and 28 feet deep, also one shipping bin 8x12 feet and 14 feet deep. The driveway is on a level with the street, and is 14 feet wide, 11 high and 56 long, giving ample room for one large dump for corn or oats opposite the deep bins, and one 600-bushel dump for wheat opposite the overhanging bins, and a 22-foot scale. The office is 14x14 feet. West of the office and off the working floor is the seed storage room, 10x10 feet. Over the driveway is a cob room 34x14 feet, and 25 feet high. A well lighted cellar 24x26 feet contains a Western Corn Sheller and an ear corn conveyor and feeder. The wheat elevator has 7x13-inch buckets, and is used also to elevate the corn and cobs to a No. 8 Monitor Combined Cleaner. The corn elevator has 7x15-inch buckets. The elevator also contains a 300-bushel hopper scale and a 4,800-pound dormant scale.

The elevator was built by an Indiana contractor.

The belting, shafting, pulleys and supplies were furnished by the Weller Mfg. Company. The engine room is built of stone, with brick topping. It has iron rafters with a metal roof, and is claimed to be fireproof. It contains a 28-horse power New Era Gasoline Engine. The gasoline house is 40 feet away. Building the gasoline house at a distance from the elevator, and placing the engine in a separate fireproof house is a fire precaution that should be rewarded by a material reduction in the rate for insurance. It not only decreases the opportunity for fire to destroy gasoline house and the engine, but



A. B. COHEE & CO.'S ELEVATOR AT BRINGHURST, IND.

also the elevator. If the elevator is burned, both of the other structures may be saved. If elevator men would give more attention to the reduction of fire hazard they would have fewer fires and interruptions of business.

In addition to the grain business, A. B. Cohee & Co., the proprietors of this elevator, conduct a general merchandise store, and have been very successful.

The Denver News is anxious to see Colorado wheat shipped out of the state. It fears the presence of so much wheat will depress the price paid to the farmer. It does not stop to think that possibly the wheat might do more damage to prices if thrown on the world's market than if kept at home.

THE AMERICAN ELEVATOR AT MANCHESTER.

Of late British trade journals and newspapers have been making much ado over the letting of the contract to John S. Metcalf & Co. of Chicago, for the erection of a grain elevator at Manchester, according to American ideas. The new elevator, which is expected to be completed in January, will have room for the storage of 40,000 tons of grain. There will be 226 bins in the house, varying in storage capacity from 37 to 300 tons. The bins will be constructed of wood; the exterior of the building will be brickwork. The building will stand at an average distance of 340 feet from the front of the quay, where there will be a tower containing a marine leg, which will be lowered into the hold of the vessels, and is designed to discharge a cargo of grain at the rate of 350 tons per hour. Arrangements will be made in the tower by means of which the grain will be weighed continuously while being conveyed from the vessel to the elevator, and the weight will be taken there both by the representatives of the vessel and of the owners of the grain. From the tower the grain will be carried by the conveyor into the elevator building, lifted to the top of the central tower, and from thence distributed into the various bins. The appliances for the delivery of the grain will be so arranged that the grain can be sacked, weighed and loaded into 40 cars and 10 carts simultaneously, all under cover. There will also be a conveyor for loading barges and coasters, either with grain in bulk or in bags, at the rate per hour of 150 tons if loose, or 250 sacks if bagged.

The same firm has also secured the contract to erect a 75,000-ton elevator on the American system at Bristol, Eng., which shows that the British warehousemen at last are willing to acknowledge the superiority of the American plan of constructing grain storehouses. A month seldom passes but several of the houses built on the British plan fall down or give way to the lateral strain. This applies with special force to the storehouses built in connection with British flour mills. In many cases the builders seem to have ignored the down pressure as well as the lateral strain. The wonder is that they have clung to the old system of construction so long, when they well knew much better and cheaper houses were being built in the United States.

Here, even the wooden elevator is now looked upon by many as being behind the times. The steel

tank has many ardent champions, and a cement structure is about to present claims for favors.

When more British warehousemen learn of the economy and advantages of the American elevator the old style of warehouse will be abandoned by the British grain trade. The United States has a number of architects and builders who have made a special study of grain elevator construction, and attained a perfection that British builders could not expect to reach without giving it years of study just as American engineers have done.

PNEUMATIC GRAIN ELEVATORS.

[From a paper read by Charles Reginald Parkes, M. Inst. C. E., at the Institution of Civil Engineers, Engineering Conference.]

It is somewhat remarkable to what a large extent the loading and discharging of grain cargoes is still carried out by hand labor, both in this country [England] and abroad. In the majority of cases grain cargoes readily lend themselves to manipulation by mechanical means, and the fact that so much of this class of work is still done by hand labor is probably due to the appliances until recently available, such



WARREN T. McCRAY KENTLAND, IND.

as buckets and grabs operated by cranes, and also bucket elevators, only being applicable under certain circumstances. The Duckham system of pneumatic elevation and conveyance of grain can be used in many cases where no other mechanical method hitherto available is possible. Grain which has been deposited in coal bunkers, and other parts of the ship which are ordinarily almost inaccessible, can be readily got at by means of the flexible armadillo pipes used in this system, and longitudinal bulkheads and subdivisions of the cargo into numerous parcels also present no difficulties when working out the cargo. A further advantage of this system is due to the fact that grain is commonly carried at the bottom of a ship, and general cargo above it. In such cases it is only necessary to remove in the first instance sufficient general cargo to allow the pneumatic grain pipes to pass down to the grain underneath, and the discharge of the grain and the general cargo can be carried out simultaneously.

Two classes of pneumatic grain elevators have been constructed—(1) Those which are designed to take grain out of barges and deliver into ships, and others practically identical to these, but used to unload large vessels and deliver the grain onto the quayside or into barges. These machines are generally operated by suction only, the air which has been drawn into the cylinders being afterward discharged into the atmosphere. (2) Elevators which carry out the same work as in No. 1, and further, on the return stroke of the pistons, compress the

air and deliver the grain, after weighing on the elevator, through pipes which might be laid under the quay into the warehouse floors at any desired elevation.

As an example of this arrangement may be mentioned the elevator "Garryowen," now in use at the Limerick Docks. The vessel is 170 feet long by 16 feet 6 inches deep, and is provided with propelling engines of 240 horse power. The grain can be discharged from four hatches at once, and the lift for each length of suction piping can be adjusted for a maximum of 50 feet vertical in the hold, and up to 100 feet horizontal between the ship's holds and the grain receivers on the elevator. The delivery into the warehouses is made through two 8-inch cast iron pipes laid underground between the quayside and the first warehouse, a distance of 90 feet. These pipes then rise to the apex of the roof of the warehouse, and horizontal branches are then carried in different directions, and provided with numerous outlets from which the grain can be discharged by gravity into the various bins as required. These delivery pipes have therefore a vertical lift of from 10 feet to 15 feet from the tanks on the elevator to the quay, according to the level of the water in the dock, a horizontal distance of 90 feet, a vertical rise of 40 feet followed by horizontal leads of varying lengths up to 250 feet.

The limit of action as regards the height and distance which the grain can be conveyed is chiefly governed by the danger of damaging the grain if the air pressure and velocity are too great. Up to a pressure of 10 pounds per square inch no injury is caused to the grain provided the pipes are smooth inside, and all bends and changes of direction are made as easy as possible. The aerating action is also highly favorable to any grain having a tendency to heating, and weevils and other parasites are also largely destroyed in transit.

The horizontal type of air-exhausting and compression engine has given the best results, as the covers of the air cylinders can be easily arranged in a hollow form, and divided horizontally into two divisions to take the necessary valves. The upper part is used to the best advantage for the suction pipe and valves, and the lower division for the exhaust or pressure portion of the apparatus. No oil or lubricant can be used in these air cylinders, as it is liable to form a paste if any fine dust is suspended in the air, and may clog the piston and valves. The pistons are packed with mica packing, and the weight of the pistons and rods is taken off the cylinders and glands by a system of slippers or rollers, so that the packing is free to take an equal bearing throughout the cylinders. Relief valves are provided on the cylinders or pipes so that the required vacuum or pressure is not exceeded. In the early machines constructed on the combined vacuum and pressure system, each end of every air cylinder was provided with a tappet valve worked by gearing and cams from the main shaft, in order to destroy the vacuum and admit fresh air as soon as the piston completed its suction or inspiration stroke; but this arrangement was quickly discarded as unnecessary. The work to be done by the air under pressure was generally greater than that to be carried out on the suction portion of the apparatus, and fresh air could be more readily admitted direct to the vacuum receiver, and so arranged that the adjustment of the suction, and also that of delivery of the grain, was quickly carried out. A rotary fan or blower has been used in small installations; but in the majority of cases the horizontal engine with air cylinders in pairs driven by cranks at right angles can be more easily adjusted, and gives a higher efficiency, and the importance of giving a steady flow to the air cannot be overrated. The capacity of the vacuum chamber or receiver will vary according to the circumstances of each case. A separate blower or pair of cylinders is required for each receiver, and the capacity of the receiver may be approximately taken at 20 cubic feet per ton lifted per hour. The larger the receiver and higher the vacuum the purer will be the air drawn into the air cylinders. The air is drawn off from the top of the receiver or vacuum chamber, and the grain falls by gravity into the air lock, which consists of a box

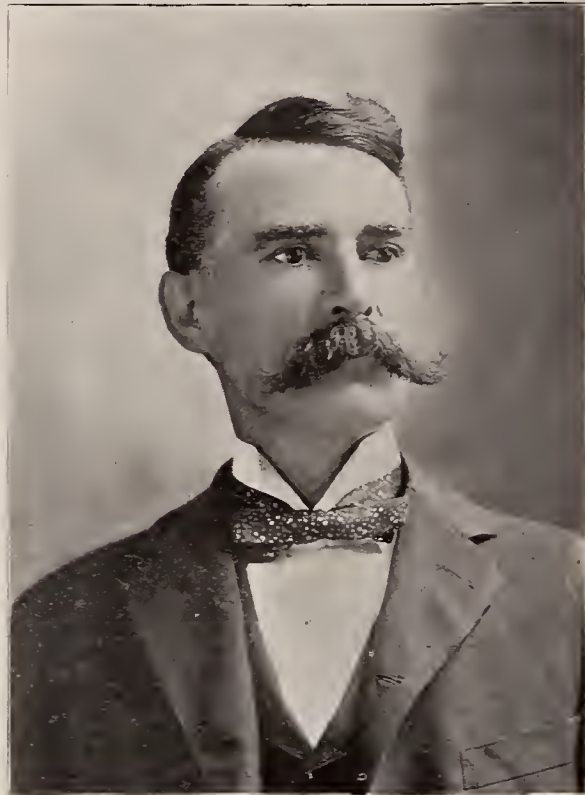
divided into two divisions, having an automatic see-saw motion on the center shaft. One division of the air lock is discharging its grain while the other section is being filled.

McCRAY & MORRISON OF KENTLAND, IND.

One of the most progressive and successful grain firms of the Hoosier State is McCray & Morrison of Kentland, Ind. In addition to its two elevators at Kentland this firm operates elevators at Earl Park, Raub, Remington and Beaver City, Ind., and an elevator at Effner, Ill. It also buys grain at Morocco. The aggregate capacity of the elevators operated is over 500,000 bushels. All the branch offices are connected by telephone with the home office at Kentland, so the firm is kept in close touch with its business at the different stations, and is able to direct every move without delay.

During the crop year of 1896-97 the firm handled about 5,000,000 bushels of corn and oats, very little other grain being marketed at their houses. Most of its shipments are to eastern markets, it being represented by brokers in all of the Eastern markets.

The firm is composed of Warren T. McCray and



JAMES L. MORRISON, KENTLAND, IND.

James L. Morrison, both men of wide business experience and broad ideas. Mr. McCray is a native of Newton County, having been born near Kentland 32 years ago. After several years' experience in the banking and the grocery business he entered the grain business at Kentland. In 1893 his partner, R. G. Risser, sold his interest to James L. Morrison, and since then the style of the firm has been McCray & Morrison. Mr. McCray was elected president of the Grain Dealers' National Association last June.

Mr. Morrison is a gentleman of about 40 years of age, and was formerly a cotton broker at New Orleans. He has large land interests in the vicinity of Kentland, and many other interests. He is a hard worker, and gives close attention to business, which is responsible for uniform success in all his undertakings.

The illustrations on the succeeding pages show some of the elevators operated by this firm. The transfer and receiving elevator at Kentland, on the Pan Handle R. R., has a storage capacity of 100,000 bushels, and a daily handling capacity of about 50 cars. It is 74 feet long, 73 feet high, and 40 feet wide. It has a driveway through the side, in which are four wagon dumps. Four receiving legs, with 14-inch buckets, are provided for removing the grain from these dumps. On the track side is a sink for receiving grain from the cars. A Safety Car Puller is provided for handling the cars, and two of Clark's Automatic Steam Shovels for unload-

ing them. A receiving leg with 20-inch buckets takes the grain from the receiving sink to the 72,000-pound Fairbanks Hopper Scale in the cupola. The Texas also contains one Invincible Cleaner and one suction fan. The house is provided with speaking tubes. A 2-inch standpipe, with 50 feet of hose connected on each floor, furnishes fire protection. Forty feet from the elevator is the steam plant. Power from the 150-horse power engine is transmitted to the elevator by a 4-inch shaft. In a building adjoining the elevator at the side are the oat clippers (1 No. 6 Eureka, and one No. 9 Invincible), driven tandem. They exhaust to the dust collectors over the furnace wherein the dirt and refuse are burned.

Across the street from the transfer elevator, and adjacent to the main office, is the Kentland Corn Elevator, with an annex for ear corn. It has 100,000 bushels' storage capacity, and is designed especially to handle corn, most of the receipts being shelled corn. Like the other elevators, it has a low driveway through the house, which has five wagon dumps to facilitate the unloading. It is a studded structure, the bins being rodded, and the house belted with 4x6 oak strips. All the bins are hoppers. The elevator has three elevator legs, two with 12-inch buckets, and one with 16-inch buckets. In the cupola is a New Process Corn Sheller of the largest size, a Western Cleaner and two hopper scales arranged side by side, so that when the hopper of one is filled the stream of grain from the elevator can be switched to the other. The steam plant, which is 40 feet from the elevator, includes a 40-horse power engine. Power is transmitted to the elevator by a 2 3/16-inch shaft.

The style of the firm at Raub is McCray, Morrison & Watkins, the third partner being Charles G. Watkins, the president of the Cleveland Grain Co. of Cleveland, Ohio. The elevator, which is on the Big Four R. R., has large handling capacity, and a storage capacity of 100,000 bushels. It is a cribbed structure 80x40 feet, and 45 feet to cupola. The cupola is 24 feet high and 20 feet wide, extending the entire length of the building. It is covered with corrugated iron. This is the newest of the firm's houses. It contains all modern conveniences, and was built to meet the restrictions and requirements of the insurance companies. It contains a New Process Sheller, a No. 6 Invincible Clipper, a Double Invincible Receiving Warehouse Separator. In the driveway through the middle of the elevator are four wagon dumps. Ear corn conveyors take the ear corn from the receiving sinks to the elevator boots. Three of the four elevators have 14-inch cups, and one has 16-inch cups. A belt conveyor takes the cobs from the elevator to the fuel room 40 feet away. The steam plant contains a 50-horse power engine. The office adjoins the fuel room.

The style of the firm at Earl Park is McCray, Morrison & Co., H. J. Caldwell being a partner at that point. This elevator was built in 1895. It has a storage capacity of 100,000 bushels, and is covered with corrugated iron. It is a cribbed structure 82x40, with cupola extending the full length. All the machinery is in the cupola. It consists of a largest size Western Cleaner and Sheller, a No. 5 Eureka Oat Clipper, an oat cleaner and two hopper scales with feed spout arranged above hoppers so that grain can be turned into either hopper. Two of the three elevators have 14-inch buckets, and one has 16-inch buckets. The dust and light dirt from the cleaner and sheller are taken to the dust collector over the furnace and burned. A belt conveyor carries the cobs to the fuel room from the sheller. In the driveway are three wagon dumps and ear corn conveyors. Forty feet from the elevator is the brick engine room containing the 40-horse power engine. The wagon scale and office adjoin the steam plant.

The elevator at Effner, Ill., on the Pan Handle, has a capacity of 30,000 bushels. It contains a New Process Sheller, two wagon dumps, two elevators, one with 14-inch and the other with 12-inch buckets. The bins are flat bottom. In the power house is a 25-horse power engine.

The firm also operates a 50,000-bushel elevator at Remington, Ind., on the Pan Handle, but it is not shown. Its elevator at Beaver City, Ind., on the C. & E. I. R. R., is being enlarged to 30,000 bushels

capacity. It has additional storage for 10,000 bushels of ear corn. The firm buys at Morocco, Ind., although it does not own the elevator.

Indiana has long been a large corn producer, the crop in 1896 amounting to 133,468,000 bushels, and much of it is grown in the territory tributary to the elevators illustrated herewith. The state is not so large a producer of oats, but a large acreage is sown annually in the northwestern part of the state, and McCray & Morrison buy much of this grain.

EXCHANGE RULES GOVERNING CARLOADS.

Shippers and elevators have had so much trouble with shortages and average in buying wheat by carloads that hereafter they will buy only a specified number of bushels, and if the car runs over or under the difference will have to be sold or bought after unloading.—Commercial Record, Duluth.

This method of trading will also make trouble. In fact no rule has been enforced to the satisfaction of all traders. The Milwaukee Chamber of Commerce has a rule which provides that "in buying or selling by the carload it shall be the rule, unless

future delivery a carload of oats shall be deemed to contain 1,000 bushels; of wheat, corn, rye and flaxseed 625 bushels; and of barley 700 bushels.

The New York Produce Exchange rules provide that "deliveries on contracts for car lots shall be on the basis of 500 bushels to the car for wheat, peas, corn, rye and barley, and 1,000 bushels to the car for oats; excess or deficiency to be settled for at the market price on the day of delivery." This rule seems to be more equitable than any of the foregoing. The drafters of it took into consideration that the seller cannot always load an exact amount into a car.

The rule of the Cincinnati Chamber of Commerce is similar to that of the New York Exchange, in that the variation in the sizes of grain cars is recognized and provided for. It provides that "in sales of car lots of grain to arrive, unless otherwise stated, a carload of corn shall be 28,000 pounds, rye 28,000 pounds, oats 32,000 pounds, wheat 30,000 pounds, and barley 30,000 pounds, any excess or deficiency to be settled at the market ruling on the day of delivery."

The Minneapolis Chamber of Commerce has a rule which provides that "in all sales of grain by the carload it shall be the rule that 30,000 pounds shall



M'CRAY & MORRISON'S TRANSFER ELEVATOR AT KENTLAND, IND.

otherwise specified, that 30,000 pounds of wheat, corn, oats, barley, rye, flaxseed or other seeds, 28,000 pounds of feed in sacks and 24,000 pounds of feed in bulk shall constitute a carload, provided, however, that as to sales of carloads already arrived at Milwaukee the actual quantity contained in such carloads shall be delivered by the seller and accepted by the buyer if the car numbers be stated during the session when the sale is made; but in case such carloads are bought for shipment and contain less than the minimum quantity required by the carrier in order to obtain carload rates of freight, then the seller shall be required either to make up the difference in quantity or to pay the difference in freight to point of destination."

The Detroit Board of Trade's rules provide that "a carload of grain for present delivery, or to arrive, shall consist of an ordinary receipt of any of the railway elevators for 500 bushels; except that a carload of oats shall consist of 32,000 pounds (1,000 bushels), and a carload of barley 30,000 pounds. Any greater or less amount, or any sales or receipts from private elevators, must be specified at the time of sale. Five hundred bushels of wheat, of corn, of rye, 32,000 pounds (1,000 bushels) of oats, and 30,000 pounds of barley, when sold for future delivery, shall constitute a carload of grain, and shall be the basis of settlement."

The rules of the Chicago Board of Trade provide that in all sales of grain or flaxseed by carloads for

constitute a carload, and 24,000 pounds a carload of feed unless otherwise specified at time of contract."

The rule of the Merchants' Exchange of Buffalo governing the quantity of sales provides that "a boat load of grain shall consist of: Wheat, 8,000 bushels; corn, 8,400 bushels; oats, 13,000 bushels. A carload of grain shall consist of 30,000 pounds."

The rule of the Board of Trade of Kansas City, Kan., provides that "in cases of sales of grain for future delivery by carloads a carload of wheat, corn, rye and barley shall consist of five hundred (500) bushels, and on sales for cash delivery carloads shall consist of not less than four hundred (400), nor more than five hundred (500) bushels. Of all other grain, twenty-four thousand (24,000) pounds shall constitute a carload for future delivery."

The Tacoma Ledger in an article on grain shipments from that port declares with a "scare" head that "Tacoma Feeds the World!" The Ledger certainly scored a scoop that time. Nobody suspected it.

The Farm Implement News says it should not be surprised to see a union of thrashermen and corn shellers. Down in Iroquois County, Ill., the price of shelling has got down to 35 cents per hundred, while a few years ago it was a dollar, and thrashing has been done as low as 90 cents per 100 bushels. There is not a living in the business at these figures.

ELEVATOR FIRES AND INSURANCE.

A Manitoban correspondent of the Insurance and Finance Chronicle asks some questions and comments on elevator fires and insurance as follows:

"As elevators are numbered by the hundreds in this Province, and there has been a loss on an average of 3 or 4 every year for the last four years, if you would kindly give me the following information you would greatly oblige. An elevator is burned at a certain point with 20,000 bushels of wheat; the owner holds insurance on 12,000 bushels, which is his own. The other 8,000 bushels is stored, but not insured. The appraiser goes out and, after doing what he can to save the wheat, he sells the balance for from \$400 to \$600. (1) Are the insurance companies entitled to all the proceeds? or (2), are the farmers who hold tickets entitled to their proportion? (3) If so, and there are ten or twelve holding the wheat, and entitled to their share, can they jointly or severally interfere with the appraiser protecting or disposing of the wheat? (4) Or, if the farmers held the most of the wheat, uninsured, could they stop the appraiser or proprietor of the elevator from hand-

on fire, the men in charge are to have instructions to hire all help necessary to save what wheat they can, and to take full charge until the appraiser arrives, always understanding that the expenses will be paid for out of the salvage. I know from past experience that it would be money in the companies' interests, as the only way to save the wheat is to shovel it out of the fire and bag it if necessary. In most cases, if properly handled, nearly all could be saved in a damaged condition; whereas, in most cases, the wheat is allowed to be burned, on account of a hesitancy that exists regarding the trifling expense that would be incurred in getting the wheat removed."

Many country elevator men have asked similar questions, but received no satisfactory answers, hence they will be interested in the reply of the editor of the Insurance & Finance Chronicle, which follows:

"Our correspondent asks five distinct questions in the second paragraph of his letter, and, while the majority of them are very easily answered, two (Nos. 3 and 4) are somewhat difficult to dispose of with absolute certainty.

"The main questions are based upon the following

think there would be any necessity for his doing so, for, surely, those having the larger interest would voluntarily protect it. An appraiser or adjuster would naturally seek the coöperation of the other owners, and not run the risk of being stopped by reason of his officious proceedings. We do not know any law on the subject, and, moreover, the case is unusual and scarcely likely to arise in the practical work of an appraiser.

"5. Who is entitled to pay the expenses?

"Answer—The expense of protecting and saving the grain is essentially a part and parcel of the loss to the assured, and up to the extent of the policy the company must pay. If there is not sufficient insurance, then the salvage must pay the expenses. All prudent adjusters or, as our correspondent designates them, appraisers should make an agreement with the assured before they begin to realize the salvage on the lines indicated.

"In answer to the third paragraph, we would remark that an insured can only be expected to protect his damaged property, as far as he reasonably can do so, and this is certainly his duty by the conditions of his policy of insurance. An agent's duty is to show the insured the condition of his policy bearing on this point, and leave him to do the rest. Apart from the fact that an insured, as a rule, has a better knowledge of how to proceed than the agent, we are of the opinion that but few agents, particularly in rural districts, could be trusted to act judiciously; we rather incline to the opinion that, if the local agent was left to take care of the salvage, it would, in the main, be poorly taken care of, and possibly the last end would be worse than the first. Moreover, it is an exceedingly dangerous thing to allow an agent to have anything to do with the loss, for the reason that, before he realizes it, he may have committed the company to a liability which did not exist, by waiving some of the conditions of the policy, although such waiver may not have been contemplated or desired.

"Without a doubt, our correspondent is correct in his remarks in the concluding paragraph. An adjuster promptly on hand is a desirable feature in loss adjusting, but, granted that it is impossible to reach the scene of the fire promptly, we do not see that anything can be done, except as indicated in the preceding remarks. General instructions cannot be given; each loss has peculiarities of its own that require the intelligence of an adjuster to deal with; that is why one is sent. We do not think our correspondent's solution of the problem of saving damaged grain will be found to act satisfactorily at all times. Weather and market have both to be considered. Hence, another reason to send an adjuster on grain losses, and to send him just as quickly as he can possibly reach the scene of the fire."

Strictly speaking, the term system as applied to English standards of units is a misnomer, for nothing concerning them is so conspicuous as the absence of system. If by it one is to understand a collection of units related by some common law or principle, then the term confusion of units is applicable with much better taste. The abandonment of our units of weight and measure and the adoption of the metric system would facilitate business and minimize the opportunities for error.

The Chicago Board of Trade decided, write Irwin, Green & Co., by a strong majority to maintain the present standard grade of wheat in this market. We think the action was a wise one. It promises to result in the putting and keeping of our market on as high a plane as to the quality of our contract grades as any other in the country. It has been objected that the rule will tend to restrict the volume of business in actual wheat. We do not think so. Already No. 1 Northern is coming here rather freely, and undoubtedly winter wheat would come hither in much larger quantity, if it were not for the relatively higher prices paid in St. Louis, which may not be maintained when the change in our standard is understood. Buyers of wheat for shipment now will know that Chicago contract wheat is a standard above suspicion, which hardly could be claimed with truth under the old regime.



M'CRAY & MORRISON'S ELEVATOR AT EFFNER, ILL.

ling or protecting the wheat as he thought best? and who would or ought to be responsible for the expenses incurred in protecting the wheat? (5) If the proprietor has all his wheat insured, and also that of the farmers stored with him, who is entitled to pay the expense of protecting and saving what can be saved in case of fire?

"There is another idea in connection with this, which I should like to ventilate in your paper, while on this strain, and that is this: An elevator takes fire at a certain locality; the appraiser is at once notified, but, perhaps, there is no train for twelve or more hours to the point in question. The appraiser tells the proprietor he is bound to do everything in his power to protect his property under the terms of his policy. He replies that he is willing to do anything in his power, but he cannot stop the fire, nor work in such a hot place. And the wheat, in the meantime, is being consumed at the rate of 1,000 or more bushels per hour, with dozens of idle men standing around waiting for a job, whose willing help, properly handled, would save hundreds of dollars, not only for the companies, but also for the country at large. The appraiser may wire the local agent in the locality what to do. Perhaps the agent does not think anything can be done; and, if it can, who is to bear the expense?

"I have been to nearly all the elevator fires in this part of the country, and, as a rule, a great deal could be saved that is otherwise lost, and the only way to get over the difficulty, that presents itself, is to have it understood that, when an elevator gets

assumed facts: An elevator is burnt, in which there is a certain quantity of grain insured and uninsured, the salvage is sold for a certain price. The questions are:

"1. Are the insurance companies entitled to all the proceeds? Answer—No.

"2. Are the storers of the uninsured grain entitled to their proportion? Answer—Yes, in the proportion that their property bears to the total property in the elevator.

"3. Can those holding the uninsured grain interfere with the appraiser protecting or disposing of the grain?

"Answer—We presume they could do so by legal injunction, if it could be shown the appraiser was sacrificing their interests, but the appraiser having, in the stated facts, the largest amount at stake, it must be assumed that, to obtain an injunction, there must of necessity be strong prima facie evidence to support the charge of malfeasance. We have never heard of such a course being taken by the uninsured; in fact, in these days one seldom hears of grain being allowed to remain uninsured.

"4. If most of the wheat is uninsured, can the appraiser or proprietor of the elevator be stopped from handling or protecting the salvage?

"Answer—First, as to the proprietor, there can be no reason why he should seek to handle the salvage, so we will dismiss him from consideration. Second, as to the appraiser, we do not think that, on a case based upon the facts stated, any appraiser would be justified in seeking to handle the salvage, nor do we

SHORT WEIGHTS AT TOPEKA.

An active cause of shortages was detected at Topeka, Kans., recently and summarily dealt with, so shippers to that market are not likely to be troubled with shortages in the near future. State Weighmaster M. H. Mulroy, in charge of weighing at that point, caused the arrest of three employes of the elevator, charging them with embezzlement, larceny and obtaining goods under false pretense.

The cause for the arrest grew out of a wheat transaction. F. C. Wagener, a St. Louis merchant, shipped three earloads of wheat to the Capitol Ele-

for four or five years by the grains that drop, at the end of which time the land becomes choked with tares, and has to be sown afresh.

The cultivation of buckwheat has never been very extensive in England, owing to the frosts of our spring, and the severity of some of our winters. The chief counties in which it is grown to a moderate extent are Norfolk and Suffolk, where it is called "brauk." If a small patch is occasionally met with elsewhere, it is usually for the sake of encouraging game, more especially pheasants, which are extremely partial to it.

The seed of the buckwheat is said to be excellent for horses, the flowers for bees, and the plant-green

THE LONG AND SHORT HAUL.

The long and short haul clause of the Interstate Commerce Law continues to furnish material for interpretation by the Commission, perhaps, to an extent which is not the case with any other provision of the law. Two decisions were rendered by the Commission this week in relation to the transportation of coal from Coroua, Birmingham and Bloeton, Ala., to local points in Mississippi on the Alabama & Vicksburg Railroad, at higher rates than were charged for longer distances over the same line to Jackson and Vicksburg, Miss. It appeared upon the hearing that the various carriers from the Alabama mines to Jackson agreed upon the rate to that place, which rate was less for each line than was charged on coal to shorter-distance points over the same line in the same direction.

This practice, the Commission held, violated the Interstate Commerce Law. The Commission deemed it necessary once again to reiterate principles of interpretation which have hitherto been repeatedly announced by it in controversies involving transportation rates which have come before it, ruling that the long and short haul clause of the law applies only when the traffic is "over the same line" and "in the same direction" and to "transportation under substantially similar circumstances and conditions," and that the shorter must be included within the longer distance.

MILWAUKEE STORAGE RATES REDUCED.

With the passing of Angus Smith from the management of the system of mammoth elevators which stand as monuments to his sagacity and enterprise, Milwaukee loses a valuable adjunct to its wheat trade for the reason that beginning October 1 the warehouses designated as Smith's A and B passed into the control of the Rialto Elevator Company, composed principally of members of the Nye-Jenks Company, and became irregular, but with the advent of the latter firm Milwaukee grain ship-



M'CRAY, MORRISON & CO.'S ELEVATOR AT EARL PARK, IND.

vator Company. A state weighmaster was to be present at the weighing of the grain. State Weighmaster Mulroy was present when the grain was weighed, and it is he who alleges that three employes cheated Wagener out of fifteen bushels of wheat, valued at \$15. Mulroy, in the complaint, alleges that the cars containing the grain were weighed properly, but that after the grain was removed O'Rourke, Nooney and Dougherty got on the scales when each car was weighed separately, thus increasing the weight of each car 300 pounds, or on the three cars 900 pounds.

It seems that the manager of the elevator company was blameless in the matter. He discharged the three men and each left the state. Defective scales are not always responsible for shortages, as has been proved many times before.

BUCKWHEAT.

Buckwheat was doubtless so designated because of a resemblance which its seeds bear to the fruit of the beech, and the name by which it is known in Germany (heath-corn) was probably assigned to it because it thrives in sandy soil, where there is an abundance of heath, writes W. H. Suckling in the Practical Baker. The Bohemians called it "pohanka," from "pohan," signifying a heathen. It is said to have been first introduced into Europe in the sixteenth century, that it was brought thither from Greece and Asia, and that the northern part of Asia is its native home. It was introduced into France in the middle of that century, and became the staple food of the poor. This grain must have been common in many parts of Germany early in the same century; for in a Bible printed in Low German, in 1522, are the words "er säet spelz" (he soweth spelt); in Isaiah, which Luther translated, "he seyet bockwete" (he soweth buckwheat). According to Gerard, buckwheat was first cultivated in England, about the year 1597.

A new species of this grain has been made known under the appellation of Siberian buckwheat, which is said to have considerable advantage over the other. It was sent from Tartary to St. Petersburg by German botanists, who traveled through that country in the beginning of the eighteenth century, and has since been disseminated throughout Europe. Linnæus received some seeds from Gerber, the botanist, in 1737, and described the plant in his "Hortus Cliffortianus." In Siberia it sows itself

for bedding cows, cattle, sheep, or swine. No grain is so eagerly eaten by poultry, or induces so much to egg-laying. The flour is fine and white, but from a deficiency in gluten does not make good fermented bread; it serves well, however, for pastry and cakes, and in Germany and Holland is extensively used, especially by farmers, dressed in a variety of ways—among others as pancakes, which, if eaten hot, are light and pleasant, but become heavy as they cool. A hasty pudding made of the flour with water or milk, and eaten with butter and sugar, is considered



M'CRAY, MORRISON & WATKIN'S ELEVATOR AT RAUB, IND.

a very tasty dish, and forms a wholesome meal for children.

The Chicago Board of Trade directory instructed the warehouse committee to investigate the manufacture of contract grain with so little arriving. For instance, on June 28, 1896, there was in store in Chicago, 7,141,590 bushels of No. 2 Spring. During the year ending July 1, 1897, 361 cars of No. 2 Spring were received, making a total of 7,376,240 bushels. During that time there was inspected out of store 11,237,585 bushels, and there was still left in store 2,144,567 bushels. The query is where the 6,000,000 bushels of No. 2 inspected out, that was not inspected in, came from? Of course everybody knows it was made out of other wheat; the mixers don't make the wheat, but they make the grade.

pers and receivers received the benefits arising from a cut in storage charges.

Henceforth grain received into store at Smith's Elevators A and B will be one-half cent per bushel for the first 10 days and one-fourth cent for each subsequent 15 days or part thereof. Previous to October 1 the rates had been three-quarters cent per bushel for the first 10 days of storage and one-quarter cent for each subsequent 10 days or part thereof.

We notice that the Farmers' Elevator Co. of Shannon, Ill., reports that it is out of pocket between \$4,000 and \$5,000, and will sell its buildings at auction. The mortality among farmers' elevator companies seems almost epidemic in its features; a sort of Bubonic plague.

LAW SUITS PENDING.

Among the suits brought recently by members of the grain trade of interest to other dealers are the following:

W. H. Booth sued William Busby of the Busby-Smith Grain and Coal Company of Parsons, Kans., in the Circuit Court at Kansas City, recently, for \$20,000 damages for defamation of character. Mr. Booth declares that Busby wrote a letter to the Murphy-Poor Grain Company of Kansas City saying that he was dishonest.

The Moffat Commission Company of Kansas City has sued Probst & Dixon of Conway Springs, Kans., for \$489. It contracted July 13 to buy some wheat from Probst & Dixon. When the price went skyward Probst & Dixon refused to ship the wheat, and the suit is to recover the profit which the Kansas City firm would have made.

A New York man has commenced suit in Chicago against Elmer and Jay Dwiggins and James R. Willard & Co. for the modest sum of \$541,000. The defendants are the crowd that failed in the grain and stock brokerage business last month. A man who has a claim of that size against an insolvent firm must have had the fever pretty bad.

O. L. Brining, owner of an elevator at Leroy, filed complaint with the railroad and warehouse commission Friday against the Illinois Central Railroad, alleging that the Central Road has refused to switch cars from its road to other roads for \$2 a car, the legal rate. Mr. Brining says the offense has been committed more than once.—Bloomington, Ill. Pantagraph.

The Andrews Grain Company of Kansas City has sued L. Schreiber of Otis, Kans., for \$600. The Andrews Company contracted July 24 to buy 15,000 bushels of wheat from Schreiber for 57 cents a bushel, to be delivered within 15 days. Schreiber sent the wheat, but drew drafts at the price per bushel to which wheat had advanced. The Andrews Company sues to recover this excess.

William G. Starkey and J. F. Starkey, doing business under the firm name of the Duluth Grain & Produce Company, have begun an action against C. E. Judd & Co., publishers of the Daily Commercial Record, Duluth, to recover damages for an alleged libelous article that, it is alleged, appeared in the Record on or about August 18. The complaint in the case was filed in district court.

Suit was begun in the District Court at Independence, Kan., September 18, against the Christie-Street Commission Company of Kansas City, by H. A. Tuskett of Caney, who claims that he employed the firm to buy and sell some wheat for him. He claims that the company owes him \$1,520, which it refuses to pay. Eighteen other similar suits have been brought against this firm for smaller amounts by Caney men. The firm has about \$3,300 on deposit at the Caney Valley Bank, and this has been attached.

Papers in a suit by eight North Dakota farmers have been filed in the United States Court against the Consolidated Elevator Company of Duluth. The complaint alleges that the plaintiffs deposited wheat in the elevator of D. M. Kenny of Mayville, N. Dak., receiving therefor elevator receipts; that Kenny sent the wheat to the Consolidated Elevator Company, which appropriated it to its own use. The farmers state that under the laws of North Dakota the wheat was not sold, but simply put in the care of the elevator, and ask judgment for \$6,262.

A suit has been filed by William and David Maudlove against A. S. Galbraith, a grain dealer of Burney, Ind., demanding \$700 for failure to deliver 10 carloads of wheat. In 1892 Galbraith, being a Democrat and having confidence that Cleveland's election would raise the price of wheat to \$1.25, bought extensively of farmers and stored for the rise, selling, however, when the bottom was reached. In 1896 he was a free silver Democrat, and, believing that the price of silver and wheat went together, bantered the Maudloves, who in 1896 were McKinley Democrats, to enter into a contract to deliver 10 carloads of good marketable wheat at 70 cents

per bushel between July 15 and Aug. 15, 1897. The Maudloves signed the contract after being twitted for their lack of nerve. The price of wheat advanced so rapidly Galbraith was unable to comply on his part, and now refuses to deliver the 10 carloads.

In the suit of C. J. Hammer against Downie, Hopkins & Co., Chicago Board of Trade brokers, with branches in Seattle and Spokane, a jury at Portland, Ore., October 7, awarded the plaintiff judgment for \$7,817, the full amount sued for. Hammer was assignee for a number of persons who had placed orders with Downie, Hopkins & Co. for wheat to be bought on the Chicago Board of Trade. He claimed that the brokers did not place the orders in Chicago, but carried them on their own account. He therefore brought suit to recover the money lost.

A test case of the new law compelling railways to make necessary connections and transfer business to connecting lines upon demand from the shipper will be made at Garfield, Wash. P. W. Lawrence, ex-state grain inspector, is complainant. The Oregon Railway & Navigation Company refused to ship a carload of wheat from Garfield to Tacoma, as billed by him, by transferring to either the Northern Pacific or Great Northern, insisting upon

second, 28¼ cents, and the third, it was worth 29½ cents a bushel, which prices the plaintiff was required to pay. The plaintiff therefore claims that he was damaged in the aggregate \$2,000, which sum he asks the court to award him out of the funds of the defendant.

C. H. Albers filed suit September 17 against the St. Louis United Elevator Company for \$31,729, an alleged deficit accruing from the sale of bonds. The petition sets forth that the Advance Elevator and Warehouse Company sold its plant in East St. Louis to the St. Louis United Elevator Company in 1889, subject to a first mortgage, securing an issue of bonds. The St. Louis United Elevator Company, as part of the purchase price, assumed the debt and guaranteed the bonds, it is alleged. Default was made on the bonds in 1896, and the property was sold at Springfield, it is stated, the sale resulting in the alleged deficit sued for.

A shortage of 600 bushels of wheat in a shipment of five carloads is the basis of a case tried before Judge Haughton at St. Louis, September 28. The parties to the action were the Brinson-Judd Grain Company of St. Louis against C. Becker, a miller of Red Bud, Ill. The shipment of five carloads of wheat, according to shippers' weights, footed up to



M'CRAY & MORRISON'S CORN ELEVATOR AT KENTLAND, IND.

the privilege of carrying the grain to Portland and forwarding to Tacoma by water. Mr. Lawrence will attempt to compel the company to obey the enactment.

The railroads interested in the famous "grain rate extortion cases" in the federal court at Sioux City, Iowa, answered the Northwest Iowa Grain Dealers' complaint October 5. The shippers claim they were overcharged on grain shipments to the East, and demand \$1,000,000 damages. They say the Western Freight Association fixed the rate, thereby violating the anti-trust law. In their answer the roads plead that the Association is no trust, that the rates were fixed by individual roads and approved by the interstate commission and that for smaller charges the common carriers' business would be unprofitable.

Thomas Leishear & Co., grain dealers of Baltimore, Md., filed a suit against the Grimm & Mitchell Commission Company to recover damages caused, it is alleged, by the defendant's refusing or failing to ship grain as bargained for. The plaintiff alleges that on April 3 last it contracted with the defendant for 50,000 bushels of corn at 28¼ cents a bushel, to be delivered within forty days; that on April 13 it contracted for 50,000 bushels more at 28½ cents, to be delivered during May, and that on April 21 it contracted for 50,000 bushels more at 28¾ cents a bushel, which the defendant failed to deliver. At the time the first delivery was to have been made the price of corn at Baltimore was 30¼ cents; the

\$1,999.64. A bill for this amount was presented and Becker returned a check for \$1,800 in payment. The shortage of 600 bushels then developed. The St. Louis firm claims the balance of the amount due on their weights, while Becker has a counter claim for \$223 for alleged over-payment.

The case of Charles A. Newsham, a farmer living near Mt. Zion, Ill., and John Boyce, a grain buyer at that station, has been on trial at Decatur before a jury. In 1895 Newsham had about 2,000 bushels of corn, and he claims that he made a contract with the grain buyer by which the latter was to take the grain at 50 cents per bushel. About that time, or soon after the contract was made, the corn price began to toboggan slide to the bottom, and the grain was never delivered. Newsham says that the dealer delayed the delivery of the corn from time to time on various pretexts until, in the end, he, Newsham, was compelled to sell the grain at 25 cents a bushel. He has therefore sued Boyce for the difference.

A fight between the Santa Fe Railroad Company and the Brinson-Judd Grain Company of St. Louis, over the possession of a grain elevator at Cherryvale, Kans., has reached the Kansas State Board of Railroad Commissioners for adjudication. It came up on a complaint of the grain company. In the papers filed to-day the grain company claims that it purchased the Cherryvale Elevator of the railroad company in February, and that the contract set forth that the railroad was to furnish it cars the

same as it had always done. It further states that the Santa Fe filed suit in the District Court of that county a short time ago to oust it from possession of the elevator. It refused to be ousted, and is opposing the suit in the courts. When it showed fight the grain company claims that the Santa Fe just stopped setting in cars to the elevator, and, in consequence, the property has been rendered almost useless. It wants the Board to compel the road to accommodate it with cars until the final hearing of the other case in court. "The grain company does not own the elevator, and never did," says Solicitor A. A. Hurd, of the Santa Fe. "It operated the elevator for some time on a lease, and last winter asked us to make a proposition to sell it the elevator. We did so and its directors refused the offer. Then the president submitted us an offer, which was rejected. Our company made arrangements with other parties to use the elevator, and served notice on the St. Louis firm to vacate the property in compliance with the terms of the lease. Then that company decided to buy the elevator and sent us a check for the amount. We returned it and told it that it would have to give up the property. That is as near as it comes to being the owner of the elevator."

ELEVATOR CHARGES INCREASED AT DULUTH AND SUPERIOR.

The public elevator managers of Duluth and Superior have posted their notices of elevating and storage charges for the ensuing crop year as required by the Minnesota warehouse law.

There is no change from the prices in vogue during the past three years, except in the charge for cleaning and elevating wheat, which is made $\frac{3}{4}$ cent instead of $\frac{1}{2}$ cent. This charge also includes 15 days' free storage. The elevator men claim the advance was made necessary by the poor conditions of this year's crop. They have found it necessary to run wheat through the cleaning machine from three to six times. The charges as changed are as follows:

The cost of storing grain in Duluth elevators is in all cases and for all grains $\frac{1}{2}$ cent per thirty days or part thereof, after the preliminary charges, which are as follows:

	Cent.
Wheat—elevating, cleaning and 15 days' storage.....	$\frac{3}{4}$
Barley, oats, rye and corn—elevating, cleaning and 15 days' storage.....	$\frac{1}{2}$
Flax—elevating and 20 days' storage.....	$\frac{3}{4}$
Flax and barley—cleaning	$\frac{1}{2}$

GRAIN COMBINE IN MANITOBA.

There has been considerable talk for some days about an alleged combine in the local grain trade.

The situation appears to be about as follows: A few years ago a number of the largest grain firms associated themselves together, and have been doing business since as the Northern Elevator Co., controlling a large line of elevators throughout our wheat districts. This company has been familiarly known as "The Syndicate." This year two new companies were formed, in each one of which a number of grain firms or dealers were associated together, thus forming, with the Northern Elevator Company, three large amalgamated companies, each one controlling a large line of country elevators. The formation of these strong companies and the construction of a large number of new elevators this season rendered the outlook somewhat exciting for the coming season's grain trade.

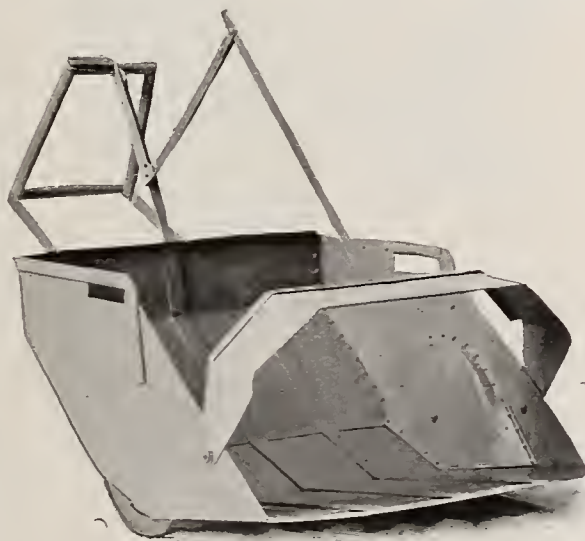
Just as the grain season began to open, rumors came into circulation that a gigantic combination was being formed in the grain trade. That these rumors had some foundation was evident from certain circumstances which came to the knowledge of those familiar with the grain trade. One circumstance was the discharge of buyers who had been engaged to represent different companies and firms, in buying grain at country points.

The discharge of these men pointed to the probability that some understanding had been arrived at as to the handling of wheat in the country. It is

also stated that one man at Fort William, and another one at New York, will represent all the amalgamated companies, as well as some other firms not supposed to be in the amalgamated companies. Whatever there may be in the way of a combination in the grain trade, we do not believe that any combination to control prices is practical. It is true that practically all the large firms which buy directly from the farmers and control lines of country elevators are alleged to be in the combine. But there are still a large number of independent dealers who are not in the syndicate, pool or combination, or whatever it may be. Then we have the millers, who must be reckoned with.—Winnipeg Commercial.

A NEW GRAIN SHOVEL.

A grain scoop has been patented by S. C. Kenaga of Kankakee, Ill., which is said to be next to a steam shovel in capacity for transferring grain. It is designed especially for the convenience of the country elevator men. The scoop shovel is made of steel, and will hold about three bushels of coal, or four bushels of grain. It is loaded by shoving it into bulk grain or coal, as with any other shovel; the lever attachment is then thrown down, the whole load is thereby retained and the grain is not scattered along the floor. The wheels of the scoop



NEW GRAIN SHOVEL.

are protected so no grain can interfere with their free movement.

The shovel is particularly adapted for unloading grain or coal from box cars or for removing grain from large bins. It can be loaded from a working floor. One man can unload 15 to 20 tons of coal or grain per hour from a box car. A platform which can easily be adjusted to the car door is provided with each shovel.

ENLARGED VISIBLE SUPPLY OF GRAIN.

It is evident that the grain trade desires an enlarged visible supply of grain—not in quantity of the cereals, but in number of points reporting. The present weekly visible supply is reliable, and of service as far as it goes. As far as its effect on the general trade in grain it has virtually outlived its usefulness. There is as large a supply of some kinds of grain in private elevators, and at storage points outside of the visible supply points, as there is reported in the regular visible supply points. It is not proposed that the enlargement should include all the small interior points, but Portland, Me., Newport News, Charleston, Mobile, New Orleans, Galveston, Memphis, Nashville, Louisville, Pittsburg, Cleveland, Sandusky, Erie, Denver, San Francisco, Tacoma, Seattle, and Portland, Ore., are markets of sufficient importance to be included in the regular weekly returns. In Canada, the supplies at Kingston, Winnipeg and a few others might be included. A few points are included now which are of less importance than most of the points named. The statistical branch of the grain trade should be progressive, and give those interested the most information possible through official sources.—Trade Bulletin, Chicago.

PROGRAM OF ILLINOIS DEALERS' MEETING.

The Illinois Grain Dealers' Association will meet at Peoria on October 19 and 20. The following program has been prepared:

TUESDAY MORNING.

10:00 to 12:00 a. m. Visiting members received by the Peoria Board of Trade on the floor of the Chamber of Commerce.

TUESDAY AFTERNOON.

1:30 p. m. Meeting called at the Elks' Hall by President S. S. Tanner, Minier.

Address of welcome, by A. G. Tyng Jr., Peoria.

Object and Purpose of the Association, by H. C. Mowry, Forsyth.

Grain Dealers' Follies, by E. L. Waggoner, traveling representative of I. G. D. A.

Applications for Membership.

Balloting on Applications.

Toledo Inspection and Weights, and address by Chief Inspector E. S. Culver of Toledo, O.

Crop Report for Illinois, by Secretary B. S. Tyler, Decatur.

Other Crop Reports.

5:30. Adjournment, for Boat Excursion Given by the Peoria Board of Trade.

TUESDAY EVENING.

A Smoker—an Experience Meeting.

WEDNESDAY MORNING.

10:00 a. m. Meeting called at the Elks' Hall.

Shall the Illinois Association Join the Federation and Adopt the Constitution as drafted by W. H. Chambers, Secretary of the Grain Dealers' National Association? by Vice-President T. P. Baxter, Taylorville.

Discussion and final action.

Chicago Inspection, an address by Chief Inspector E. J. Noble, Chicago.

Chicago Weights, an address by Board of Trade Weighmaster T. H. Foster, Chicago.

Adjournment.

WEDNESDAY AFTERNOON.

1:30 p. m. Meeting called at Elks' Hall.

Miscellaneous Business.

How Shall the Country Dealer Find Relief from Excessive Shortages?

General Discussion, opened by B. S. Tyler.

Contracts Made with Farmers by Local Dealers.

Adjournment to inspect the Peoria public elevators recently erected.

FLAXSEED AT DULUTH.

The Commercial Record of Duluth, in its issue of October 5, says: So far the percentage of No. 1 Northwestern seed has been much larger than last year, and even the Rejected seed is a pretty fair article. From the way receipts are coming now it might not be a bad idea to adopt Chicago's grades, viz.: No. 1 Northwestern seed, minimum weight 51 pounds, and No. 1 seed, minimum weight 50 pounds, or call the latter No. 2 Northwestern seed. A very large percentage of this year's No. 1 Northwestern seed is testing 51½ pounds. The dockage, however, is very heavy, the average on this morning's receipts here, 104 cars, having been 9½ per cent., and several of these cars were from Minneapolis, where they evidently had been through an elevator as the dockage was down to 1 and 1½ per cent.

It is advisable to have fire fighting apparatus of your own, then fires in the elevator can be extinguished in their incipency. An Illinois exchange says: "When the elevator at Havana caught fire the other day it was found that the fire department ladders had been loaned to a painter, and were three miles out in the country, where the man was painting a barn. Two elevators were destroyed." If barrels are placed at convenient points about the elevator, kept full of salt water and buckets hung near each barrel, many of the fires would never get beyond control.

COMMUNICATED

[We invite correspondence from everyone in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

CHANGES IN LIST OF REGULAR DEALERS.

Editor American Elevator and Grain Trade:—Please publish the following corrections in the list of regular grain dealers of Illinois compiled by the Illinois Grain Dealers' Association:

Insert Veech & Goodpasture instead of Lichtenberger & Veech at Sangamon.

Insert Moore Bros. & Delaney instead of Chamberlain & Mansfield at Niantic.

Insert James Chamberlain instead of Fred P. Rush & Co. at Farmer City.

Insert N. A. Mansfield at Tuscola.

Insert Geo. Ashmore at Lovington, member of the Illinois Grain Dealers' Association. An elevator is being constructed by him on the Wabash Railroad at that point.

McCullough & Sons of Cincinnati Ohio, having discontinued their grain business, withdraw from the Association.

Change Wallback & Co. of Peoria, to read Walbach & Co.

Yours very truly, B. S. TYLER.
Decatur, Ill. Secretary.

CHARLESTON'S ELEVATOR AND FUTURE GRAIN TRADE.

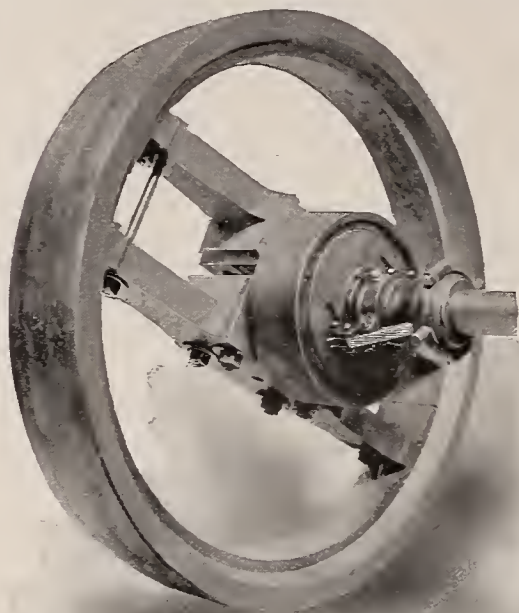
Editor American Elevator and Grain Trade:—It is with a great deal of pleasure that I am now able to state that my predictions for our port are beginning to materialize. Our jetties have been completed and have accomplished their work beyond my most sanguine expectations. We have now 24½ feet of water on our bar, and a harbor unsurpassed by any city on the Atlantic Coast. No sooner had deep water become an assured fact for our port than we found our railroad taking advantage of its opportunity to establish the trade that our city was destined to secure with her natural advantages. I refer particularly to the importing and exporting trade. I take the following account from the Charleston News and Courier, which will give an idea of the work being done: "Charleston has now a thoroughly equipped and perfectly arranged grain elevator. This very important adjunct to the city's railroad and steamship facilities is the property of and will be operated by the owners of the South Carolina and Georgia Railroad, and is situated at the Cooper River terminals of that company. The buildings are extensive, and are all arranged for the greatest convenience. The elevator is fronted by a splendid wharf reaching 300 feet into Cooper River, with docks deep enough to receive the deepest draft vessels that come into this port. The machinery is of the latest and most approved pattern, and is so arranged that cars may be unloaded and a stream of grain continually passing directly through to vessels on the water side, or the cars can unload into bins while grain is being taken from other bins to the ships. The bins are not so large or deep as those in Northern and Western elevators. This difference in construction is of great advantage, as it disposes of the grain in smaller and thinner bulk, and thus reduces the opportunities for heating. There are two fans in connection with the bins. The grain can be moved from one bin to another and cooled, should this be found necessary at any time. The capacity of these fans is sufficient to handle and cool 4,000 bushels of grain per hour.

"The storage capacity of the elevator is 200,000 bushels. It has a receiving capacity of 5,000 bushels per hour, and a delivery capacity of the same quantity. The elevator is so arranged and equipped that it can receive and deliver at the same time, thus practically handling 10,000 bushels per hour, 5,000 bushels inward, and 5,000 bushels outward. An excellent feature of this elevator, and one calculated to keep the grain cool in warm weather, and free from dampness, is that the bins are not located on the lower floor, but are all above that floor, supported in the strongest manner upon most substantial foundations, thus providing for a free

and plentiful passage of air under the bins, insuring perfect safety from damage to the grain while stored in the elevator, or in course of handling and shipment.

"The facilities for loading vessels direct from the elevator are of the latest. In addition to a large spout a new belt conveyor now extends the entire length of the pier, with a number of spouts along its length, which will enable the grain to be loaded into all of the various holds of a vessel at the same time.

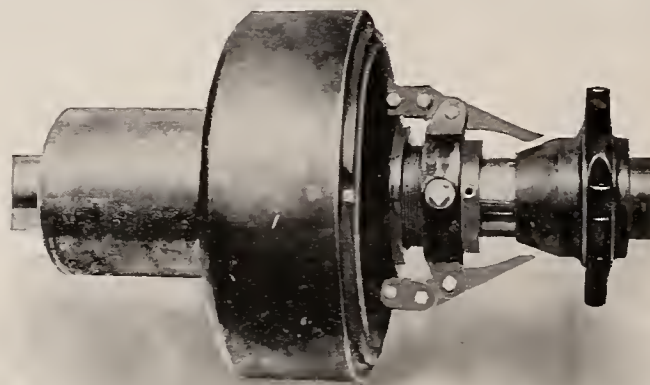
"The belt conveyor is one of the most interesting parts of the elevator plant. In the long, narrow



ORTON FRICTION CLUTCH.

building, perched high on trestle work, and extending the entire length of the elevator wharf, is a rubber belt about 3 feet wide and several hundred feet long. The grain to be loaded into a ship comes down by gravity from the top floor of the elevator and falls on this belt. A movable tripper gathers the grain at any point desired and conducts it down a long spout into the hold of a vessel.

"A 250,000-bushel cargo of grain can be loaded into a vessel in 48 hours and those vessels that may take a mixed cargo of grain, cotton and other goods can have 125,000 bushels of grain loaded into their



ORTON FRICTION CLUTCH.

various holds in 24 hours. The modernizing and reconstruction of the elevator were done under the superintendence of a grain elevator architect of Buffalo, N. Y."

Yours truly, I. N. ROBSON.
Charleston, S. C.

New rules governing the shipment of grain from Canada exported via the ports of New York, Philadelphia and Baltimore, to take effect October 25, have been recommended by the managers of the Joint Traffic Association. Grain from the provinces of Quebec and Ontario will be inspected and graded in Canada before passing the frontier, and the cars will be turned over to the trunk lines with duplicate certificates from the Canadian Government inspectors attached to waybills.

THE ORTON FRICTION CLUTCH.

A strong, easy working and practical friction clutch of small dimensions and reasonable cost has been brought out by the Dodge Mfg. Co. It is claimed that it is capable of taking care of large powers, in fact, it is made to transmit from two to fifty horse power, so is well suited for throwing the drives of elevator heads or cleaners in and out of gear. It is a solid friction clutch of late design and has little mechanism.

It is entirely self-contained, and will take full clamping or friction power without moving either shaft or pulley. The multiple friction plates are said to do perfect work. The pressure brought to bear on the first is transmitted to the second and to the third, etc.; and as all are drivers and splined to the main driving hub, it may readily be understood that twice the power is derived from two plates which would otherwise be realized from one. It is always in balance, and can be operated at any speed, or can be used on countershafts, where reverse motion is required, as a duplex clutch.

NOT REQUIRED TO REMOVE ELEVATOR.

It seems that rail carriers do not always have their own way; sometimes they find it necessary to respect the rights of the elevator men. As a result of the persistence of Fred S. Bartels, elevator man of Gary, S. Dak., the railroad company has receded from a former position, and that, too, without a lawsuit.

Mr. Bartels has had an elevator at Gary, on land owned by the Northwestern, for twelve or fifteen years. Some months ago he received notice from the railway company to remove his building from the company's land. He appealed to the Commission, and asked for a condemnation of the site. The Commission corresponded with the Northwestern, and received a reply from J. M. Whitman, general manager, who stated that the warehouse was located on ground owned by the Northwestern Company, and that Mr. Bartels had no lease or other permission from the company to use the ground as a site for a warehouse. Mr. Whitman said: "It will be necessary for us to require the removal of this warehouse from our property."

The Northwestern management was notified by Secretary Sawyer that the Railroad Commission

would hold a session at Gary on September 21, for the purpose of condemning the site occupied by Mr. Bartels' elevator. This action has been rendered unnecessary by the receipt of a second letter from General Manager Whitman. The tenor of this letter is in striking contrast with that of the first one quoted. Mr. Whitman says:

"Since I last wrote you on the subject, this matter has received further consideration, and it has been decided that the Northwestern Company will not take any further steps toward requiring Mr. Bartels to remove his warehouse from the company's grounds."

Every regular grain dealer will be welcome at the meeting of the Illinois Grain Dealers' Association in Peoria, October 19 and 20.

QUERIES: AND: REPLIES

[Questions and answers are inserted under this head free of charge, and all are invited to avail themselves of this column.]

No. 5. Who Makes Richards Sheller?

We have been using a Richards Sheller in our elevator for the past 10 years, and think it is the best large sheller made, but have been unable to ascertain where it is made and whether its manufacture is now discontinued. We will be pleased if any of the readers of this journal will furnish us information about the makers of this machine.—PIAZZEK & GEIGER, Valley Falls, Kans.

TRANSPORTATION RATES FOR GRAIN IN RUSSIA.

In view of the competition of Russia as a grain exporter with the United States, not to mention competing interests in India, the Argentine Republic, Australia and elsewhere, recent statistical investigations in Russia as to the distance which grain is carried by rail and water within that country prior to being exported are of more than usual interest. As pointed out by the Railroad Gazette, these statistics of shipments from different sections of the Russian Empire in Europe to exporting points and to interior centers of consumption are "probably the most complete" of the kind ever published "for any considerable country." Prominent among the tables is one showing the distance grain is carried before arriving at the ports, from which it appears that, notwithstanding the vast area of the country under discussion, and reductions in rates by the Russian railway tariff in 1893 for grain carried great distances, 1,300 to 2,300 miles, no grain whatever was shipped by rail for export in 1894 further than 1,665 miles from the border, and less than 1 per cent. of such exports were carried more than 1,330 miles, while nearly 55 per cent. was moved less than 265 miles, which, as the paper named states, "is as if more than one-half of our export grain was produced east of Pittsburg or south of Memphis." During 1893, when the reduced Russian railway rates were first enforced, less than 13,000,000 bushels of grain, out of a total of 170,000,000 bushels exported from that country, were carried as far as 1,000 miles by rail or river, and less than 50,000,000 bushels as far as 665 miles, which shows a surprising advantage to Russian grain farmers over those in the United States. This is due to the fact that the great Russian grain-producing region lies relatively close to the west and south border of that country, requiring practically no more inland transportation than the cereal products of the Pacific Coast in this country. In the year named, out of 90,000,000 bushels of grain exported from Russian ports on the Black Sea and Sea of Azov, 74,000,000 bushels were carried less than 383 miles on their way to the border, and 10,000,000 bushels less than 66 miles, while fewer than 60,000 bushels went as far as 665 miles. Exports from Baltic ports, which are almost exclusively oats and rye, were carried further prior to reaching ports of export, amounting in the year named to about 33,000,000 bushels, which traveled from 333 to 665 miles before shipment, an insignificant distance compared with that which export grain from the Mississippi River Valley has to go.

Out of practically all the grain transported in Russia during the three years ended with 1895, more than three-fourths was shipped from what is called the "black land" country, south of Warsaw and Moscow, extending east nearly to the Ural Mountains, and south nearly to the Caspian, about one-quarter of Russia in Europe, and not a greater area than that of the grain-growing states of Minnesota, the Dakotas, Iowa, Nebraska, Missouri and Kansas.

Additional statistics show that the average distance grain was carried in Russia during the years mentioned was 446 miles, and the average freight rate paid 18½ cents per 100 pounds. A significant fact is that grain exported from Russia is carried in that country, on the average, a less distance than that consumed there. As figures covering five years show an annually increasing average haul of export grain, it becomes plain that the new railway

tariff has enlarged the grain-growing territory and increased the importance of Russia as a rival exporter. When it is realized that the grain exported from Atlantic ports of the United States generally has its origin in the Mississippi Valley or further west, there is particular significance attached to the fact that like cereals originating in Russia and transported to Odessa, the Chicago of the Black Sea, travel on the average only 186 miles, and pay on the average 11.3 cents per 100 pounds to get there. Grain shipped from ports on the Sea of Azov originates nearer to them than that going to Odessa, but that going abroad by way of St. Petersburg travels on the average 700 miles, and pays 25.5 cents per 100 pounds. That going abroad by way of Revel, Riga and Dantzic, in Germany, travels further and pays more.

PORTUS B. WEARE.

Portus B. Weare, senior member of the well-known Weare Commission Co. of Chicago, has extensive interests in the grain business throughout the middle and western states, and has been a prominent factor in the development of this trade for over 30 years. He was born in Otsego, Allegan Co., Mich., Jan. 1, 1842. His father, John Weare, was a farmer, who had emigrated from Vermont in 1835, but upon removing to Cedar Rapids, Iowa, in



PORTUS B. WEARE.

1846, he became president of the First National Bank.

At the age of 16 Portus went to Sioux City, Iowa, where he became connected with the banking and commission business of Weare & Allison. He served for three years with this firm as trading clerk with the Indians, which required him to brave many hardships. When 19 he came to Chicago, and was admitted to partnership in the house of H. W. Rogers & Co., engaged in the buffalo trade with the Indians. In 1865 Mr. Weare with his brothers, C. A. and E. E. Weare, organized the P. B. Weare Commission Co. Mr. Weare soon became recognized as one of the principal figures in the buffalo trade. With the extinction of those animals, the extensive facilities of his company were turned to the cattle business.

As the agricultural interests of the country developed, Mr. Weare enlarged his holdings in the grain business, so that now his company maintains 65 stations in Illinois, Iowa, and Nebraska. He owns a storage capacity of over 5,000,000 bushels along the lines of the C. & N. W. Ry. As manager of the Chicago Railway Terminal Elevator Co. he controls a large amount of grain storage. This company owns eight of the largest Chicago elevators, having an aggregate storage capacity of 10,000,000 bushels. He is also a director of the Globe Elevator Co. at West Superior, Wis. He has been a member of the Chicago Board of Trade since 1862.

The Star Milling Co. of Grand Rapids, Mich., caused the arrest of three men recently, and will prosecute them for returning false grain weights.

DOTS AND DASHES

The Canadian Pacific added 1,700 new cars to its equipment on account of the large crop in its territory and the improved feeling in business.

Ralls County, Mo., claims the unique distinction of shipping none of its corn, though it is a good corn country. It is all fed at home, and corn is sometimes shipped in from the outside.

The city of Atchison, Kans., held its annual corn carnival on September 23. This yearly carnival has become very popular. Many wonderful things, made entirely of corn, are displayed at the exposition.

A number of Chicago firms who handle spring wheat grown in Northern Iowa and Nebraska insist that it should grade No. 1 Northern if of suitable quality, and therefore be deliverable on contracts.

According to the report of Harbormaster Hoffman the exports of wheat from the port of Tacoma, Wash., during the month of September aggregated 711,079 bushels, valued at \$624,406. The exports of flour amounted to 17,492 barrels, valued at \$71,614.

The Board of Managers of the Joint Traffic Association are said to have decided to advance freight rates on grain and grain products, Chicago to New York, to 22½ cents, October 15. They seem to be determined to force grain to the seaboard via the water route.

A new grade of wheat has been established by the Dakota elevators, which will be known as No. 4 Northern. It is between Rejected and No. 3 Northern and is found to grade that weighing from 52 to 54 pounds. If of that weight but otherwise good milling wheat it will be graded No. 4 Northern instead of Rejected.

The grand jury of Cook County has again set the indictment mill in motion, the Chicago bucket shops furnishing the grist. The indefatigable John Hill Jr. has furnished most of the evidence. Among the parties indicted are the Capital Commission Co., Equitable Produce Exchange, Consolidated Produce Exchange and Valley & Co.

Importers at Liverpool are complaining bitterly of the grading of American grain, especially that sent from the Southwestern ports. In addition to this the United States Consul at that place reports that the importers have cause for complaint of the shortages in weight that are continually occurring in cargoes shipped from the Gulf.

The Pittsburg Times sings the praises of corn thus: Not all the gold of all the El Dorados and Klondikes of the century can equal its value for a year. It is the main source of our national strength and prosperity, and one of the chief foundations of our greatness. It is the incarnation of Plenty. Simultaneously with singing, "God Bless Our Native Land," we should sing, "God Bless Our Yellow Corn."

Several of the grain buyers of the state, in order to comply with Great Britain's decision to receive no grain or other products contained in bags made in any penitentiary outside of those belonging to the British Empire, have advised shippers that if any penitentiary sacks with distinguishing marks arrive in this market our Portland exporters will refuse the same and throw back the cost of resackage in sacks that will be suitable to foreign buyers upon the shipper.—Commercial Review, Portland, Ore.

Interstate Commerce Commission still exists, but what good has it accomplished? None whatever. Special rates, we believe, are as common now as before the commission was established, and we don't know of any fines having been imposed for breaking the law. This Commission is now investigating some charges in Chicago, but the shippers who are expected to answer questions have all gone on a vacation, and we'll bet dollars to doughnuts nothing will come of said investigation. There are five commissioners who receive a salary of \$7,500 per annum, also a secretary who receives \$3,000—a total of over \$40,000 per annum, besides other expenses. To us, it looks like so much money wasted.—Zalim's Circular.

CHANGING SEED WHEAT.

It is no longer disputed that in ordinary farming the sowing of any given variety of winter wheat continuously on the same land or in the same locality results in its deterioration, both as to yield and quality. The numerous letters which each season brings to his office relative to this condition, and as to the sections from which the most profitable change of seed is likely to be had, have prompted Secretary Coburn of the Kansas Board of Agriculture to obtain for publication the views of those having the largest opportunity for observation in such matters and noting intelligently some of the practical results. No other men are in such close touch with wheat-raisers, and the wheat interests as the millers, and the tenor of the valuable information secured from them in reply to inquiries is well shown in extracts from some of their letters as follows:

Mr. C. V. Topping of Enterprise, secretary of the Kansas Millers' Association, writes: "The belief existing among winter wheat growers that sowing the same varieties year after year in the same latitude lowers the yield and quality is correct. C. Hoffman & Son, extensive millers at this place, last year imported from Russia some of the pure Russian wheat. (This is the Crimean winter wheat, and I would suggest for accuracy and definiteness that the name Crimean winter wheat be used for this Russian variety, and that the misnomer "Turkey" or "Rice" wheat be discarded). A number of years ago the same quality of wheat was imported, and by comparing the wheat that has been sown here year after year with that just imported, it shows a very marked difference both in quality and certainly in yield of bushels per acre as well as in the wheat product. The flour from pure Russian wheat is much stronger than that from wheat that has been sown and resown in this country for a number of years. Farmers should change seed certainly every five years, and I consider that it would pay them well to change every three years.

Mr. J. W. Krehbiel, manager of the Moundridge Milling Co. at Moundridge, McPherson County, says: "The nature of our wheat undergoes some change, and it would be very profitable to procure new seed at least every ten years. I think a decline in the original qualities for milling will first be manifested, but as the plant loses its native European hardiness (as the Turkey variety) it will not stand the winter so well, and consequently give a less yield. Our locality would want Turkey wheat imported from Russia."

Mr. B. Warkentin, president and manager of the Newton Elevator and Milling Co., Harvey County, says experience teaches him that by sowing the same variety year after year in the same locality it changes its qualities both as to yield and milling. "Our so-called Turkey wheat is becoming softer from year to year. Of course, the growing season has much to do with this. If the wheat can mature without too much rain the per cent. of gluten, which makes it valuable, will be much larger than otherwise. In my opinion our farmers should change seed at least every four or five years, and new seed should be imported from the Crimea about every six to eight years. Farmers should be encouraged to exchange for seed from a distance of say 25 miles, as I have found it a great means of improvement. Our soil and climate seem best adapted for the red, hard winter wheat, with which we can easily compete in the world's markets. I have twice within the past ten years imported fresh seed wheat from the Crimea—the wheat known as the Russian Turkey, the beneficial results of which are very plainly seen in our county."

Prof. C. C. Georgeson of the State Experiment Station at Manhattan, says: "That wheat does deteriorate in the course of years under the care that the average farmer gives his crop I think must be conceded. The yield becomes less, the grain of an inferior quality, and the millers complain that the proportion of bran to flour is too large. From what section it would be most desirable to procure a change of seed cannot be answered positively. In our experience here at

the station we have as a general thing had the best results from wheat grown in about the same latitude to the eastward of us. The start for our best yielding varieties came from Virginia, Maryland and Ohio. A variety of superior merit, produced only by selection and culture under the most favorable conditions, can maintain its superiority only when grown and selected with the same care which produced it. Our farmers do not give their wheat that care and culture, and the legitimate result is that it runs out. The main cause of deterioration then is under the control of the farmer himself."

AN ADJUSTABLE BOX FLOOR STAND.

On the upper floors of many elevators are long lines of shafting to transmit power to the elevator heads, cleaners, clippers and shellers, and as this shafting is supported by the building, it is frequently thrown out of alignment by the settling of the heavily laden bins. The shafting is seldom given any attention, as it would require the shutting down of the plant to true it, and the superintendent is not



AN ADJUSTABLE BOX FLOOR STAND.

willing to take the time. The sagging, wobbling shaft not only increases the fire hazard, but also greatly increases the cost of operation.

By using adjustable ball and socket box floor stands the work of removing a bearing is made easy, and a shaft can be placed in alignment easily and quickly. The floor stand illustrated herewith has recently been placed on the market by the Dodge Mfg. Co. It is neat, strong and rigid, and the bearing can be removed without disturbing the stand or line shaft or anything on the line shaft.

SAN FRANCISCO GRAIN STANDARDS.

According to Chief Grain Inspector Louis Steller the grain standards for the crop of 1897, as agreed upon by the Grain Committee of the San Francisco Produce Exchange, require that a bushel of each standard shall weigh as follows:

	Pounds.
Choice milling wheat, 30 per cent. Club.....	69
No. 1 milling wheat, 40 per cent. Club.....	60
No. 1 white wheat, 40 per cent. Sonora.....	60
Choice Club wheat	60
Choice Sonora wheat	62
No. 1 Sonora wheat	61½
No. 1 brewing barley, 15 per cent. coast.....	46
No. 2 brewing barley	44
No. 1 Chevalier barley	53
No. 2 Chevalier barley.....	50
No. 1 feed barley, dark.....	42
No. 1 feed barley, bright.....	40

NEW CANADIAN TARIFF ON GRAIN.

The new Canadian Tariff provides for a duty on grain and breadstuffs as follows: Buckwheat, 10 cents per bushel; peas, 10 cents per bushel; rye, 10 cents per bushel; hay, \$2 per ton; dutiable breadstuffs, grain, and flour and meal of all kinds when damaged by water in transit, 20 per cent. ad valorem on the appraised value, such appraised value to be ascertained; buckwheat meal or flour, ¼ of a cent per pound; Indian corn, for purposes of distillation, subject to regulations to be approved by the Governor in Council, 7½ cents per bushel; oats, 10 cents per bushel; oatmeal, 20 per cent. ad valorem; rice, uncleaned, unhulled or poddy, ½ cent per pound; rice cleaned, 1¼ cents per pound; rice and sago flour and sago and tapioca, 25 per cent. ad valorem; rice, when imported by makers of rice-starch for use in their factories in making starch, ¾ cent per pound.

Wheat, 12 cents per bushel; wheat flour, including the duty on the barrel, 60 cents per barrel; garden, field and other seeds for agricultural or other pur-

poses, not otherwise provided for, sunflower, canary, hemp and millet seed, when in bulk or in large parcels, 10 per cent. ad valorem, and when put up in small papers or parcels, 25 per cent. ad valorem; bags or sacks of hemp, lichen or jute, and cotton seamless bags, 20 per cent. ad valorem. Indian corn not for purposes of distillation and under customs regulations is admitted free of duty.

MONTREAL'S EXPORT GRAIN TRADE.

The total exports of grain from this port during the present season up to the middle of September, comprising wheat, corn, peas, oats, barley and rye, amount to 17,065,277 bushels, as compared with 11,121,867 bushels for the like period in 1896, showing an increase of 5,943,410 bushels, or 54 per cent. The greatest increases were in corn and oats, the former showing an excess of 2,955,527 bushels and the latter 2,340,407 bushels. The shipments of peas were larger by 388,678 bushels, barley by 85,147 bushels and rye by 235,217 bushels. Wheat was the only cereal that failed to exhibit an increase; but, instead, showed a decrease of 60,666 bushels. At the close of the season it is confidently expected that the total exports of grain from Montreal will show a still greater increase, as there is an active inquiry for ocean grain space for October and November.—Trade Bulletin.

MILWAUKEE'S NEW INSPECTION RULES.

Secretary Langson, of the Milwaukee Chamber of Commerce informs us that the new rules governing the inspection of grain in that market, which are now in force, are as follows:

SPRING WHEAT.

No. 1 Hard Spring Wheat—Must be sound, bright and well cleaned, and must be composed mostly of Hard Scotch Fife Wheat.

No. 1 Northern Spring Wheat—Must be sound and well cleaned, and must contain not less than about 50 per cent. of the hard varieties of Spring Wheat.

No. 2 Northern Spring Wheat—Must be good, sound milling wheat, reasonably clean and of the varieties composing No. 1 Northern Wheat, but not meeting the requirements of the higher grade.

WASTAGE IN CLEANING.

In inspecting wheat that meets the requirements of No. 1 Hard, No. 1 Northern or No. 2 Northern grade, except in respect to cleanness, the inspector shall ascertain the number of pounds per bushel of waste to which it would be subjected in cleaning to meet the requirements of the grade by taking an equal quantity from not less than seven different places in the car evenly distributed, by passing a geared trier down through the wheat and drawing up samples from the entire depth of the mass and mixing the whole thoroughly together, from which 60 ounces shall be taken, and the seeds and other waste matter separated from the wheat by the use of a suitable apparatus for the purpose, and the quantity found to be wasted per bushel shall be noted by the inspector, together with the grade the wheat would be entitled to inspect after being cleaned, upon his inspection ticket and book, opposite the number designating the car inspected. The wastage so determined and noted shall be deemed and taken by all parties concerned as the true shrinkage of the wheat contained in the car; subject, however, to appeal to the Supervisors of Grain Inspection in the same manner as provided in case of appeal for alleged error in grade.

In inspecting Spring Wheat of other grades the inspector shall, when requested by the consignee, designate the grade to which the wheat would belong, according to the requirements of the rules, except in respect to cleanness, and shall, when so requested, ascertain and record the wastage in cleaning the same in the manner hereinbefore provided.

No. 1 Spring Wheat—Must be sound, plump, well cleaned Spring Wheat.

No. 2 Spring Wheat—Must be good, sound milling wheat, reasonably clean, but not meeting the requirements of the higher grades, nor being required to have any mixture of the hard varieties.

No. 3 Spring Wheat—Shall comprise Spring Wheat too much shrunken or otherwise unfit for the higher grades, but not badly damaged from any cause.

No. 4 Spring Wheat—Shall include Spring Wheat that is musty, grown, badly bleached, or by any cause rendered unfit for No. 3, but fit for warehousing.

WINTER WHEAT.

No. 1 White Winter—To be sound, well cleaned, reasonably plump, and composed of the white varieties.

No. 2 White Winter—To be sound, reasonably clean, and composed of the white varieties.

No. 1 Red Winter—To be sound, well cleaned, reasonably plump, and composed of the red varieties.

No. 2 Red Winter—To be sound, reasonably clean, and composed of the red varieties.

No. 2 Hard Winter Wheat—To be sound, reasonably clean, and composed of not less than ninety (90) per cent. of the variety of wheat known as "Turkish Winter."

No. 1 Winter—To be sound, well cleaned, reasonably plump, and composed of mixed white and red winter.

No. 2 Winter—To be sound, reasonably clean, and composed of mixed white and red winter.

No. 3 Winter—Shall comprise all Winter Wheat fit for warehousing, weighing not less than 54 pounds to the measured bushel, not sound enough or otherwise unfit for No. 2 of the other grades.

No. 4 Winter—Fit for warehousing, but otherwise unfit for No. 3.

Mixed Winter and Spring Wheat—In case of a mixture of any considerable or material quantity of Winter Wheat with Spring Wheat, it shall be called Mixed Wheat, and graded according to quality thereof, as provided for in the rule governing the inspection of Spring Wheat with reference to weight and condition.

Rice Wheat—Shall in no case be inspected higher than No. 4.

CONTRACT GRADES OF WHEAT.

(Sec. 7 of Rule XI as amended Aug. 21, 1897.)

All contracts for the purchase or sale of wheat, unless otherwise specified, shall be understood to be for No. 2 wheat, comprising No. 2 Spring, No. 2 Northern Spring, No. 2 Red Winter Wheat, and

No. 2 Hard Winter Wheat, and these grades or the higher grades of these varieties, either in whole or in part, shall be delivered and shall be received in fulfillment of such contracts.

Proprietors of regular elevators may be permitted to issue warehouse receipts for No. 1 Northern and No. 2 Northern Wheat which may have been inspected into store as such grades subject to "dockage," which receipts shall be regular and current for delivery on contracts for their respective grades, provided that the number of bushels stated be for the net amount of bushels after deducting the dockage, and provided that the warehouseman agree on the face of such receipts to deliver the grain from store, when required, in a condition as to cleanliness meeting the requirements of the grade specified by the receipt. Nothing herein contained shall be construed as permitting the mixing of grades in store in any regular elevator.

CORN.

No. 1 Yellow Corn—Shall be yellow, sound, dry, plump and well cleaned.

No. 2 Yellow Corn—Shall be three-fourths yellow, dry, reasonably clean, but not plump enough for No. 1.

No. 3 Yellow Corn—Shall be three-fourths yellow, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 1 White Corn—Shall be sound, dry, plump and well cleaned.

No. 2 White Corn—Shall be seven-eighths white, dry, reasonably clean, but not plump enough for No. 1.

No. 3 White Corn—Shall be seven-eighths white, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 1 Corn—Shall be mixed corn of choice quality, sound, dry and well cleaned.

No. 2 Corn—Shall be mixed corn, dry, reasonably clean, but not good enough for No. 1.

No. 3 Corn—Shall be mixed corn, reasonably dry and reasonably clean, but not sufficiently sound for No. 2.

No. 4 Corn—Shall include all corn not wet or in heating condition that is unfit to grade No. 3.

OATS.

No. 1 White Oats—Shall be white, sound, clean and reasonably free from other grain.

No. 2 White Oats—Shall be seven-eighths white, sweet, reasonably clean and reasonably free from other grain.

No. 3 White Oats—Shall comprise oats not less than seven-eighths white, slightly unsound, too light in weight or not sufficiently clean for No. 2.

No. 1 Oats—Shall be mixed oats, sound, clean and reasonably free from other grain.

No. 2 Oats—Shall be sweet, reasonably clean and reasonably free from other grain.

No. 3 Oats—Shall comprise oats less than seven-eighths white, slightly unsound, too light in weight or not sufficiently clean for No. 2.

No. 4 Oats—Shall include all oats that are damp, unsound, dirty or from any other cause unfit for the higher grades, but fit for warehousing.

RYE.

No. 1 Rye—To be sound and well cleaned.

No. 2 Rye—To be sound and reasonably clean.

No. 3 Rye—All rye damp, musty, dirty, or from any cause unfit for No. 2.

BARLEY.

No. 1 Barley—Shall be of a bright, natural color, plump, sound, well cleaned, and free from other grain.

No. 2 Barley—Shall be sound and reasonably plump, reasonably clean and free from other grain—good malting barley, but may be slightly stained.

Extra No. 3 Barley—Shall comprise barley that is slightly unsound, or too much stained or shrunken for No. 2, but otherwise meeting the requirements of that grade.

No. 3 Barley—Shall include shrunken, discolored, but reasonably sound barley, and fit for malting purposes.

No. 4 Barley—Shall include all barley for any cause unfit for No. 3, but fit for warehousing.

Barley of the varieties known as "Chevalier," and "Bay Brewing," shall be so designated when inspected of the several grades above and including No. 3, and shall conform in all respects to the foregoing requirements for the various grades. This shall be considered as establishing separate grades for the varieties designated.

All grain of newly harvested crop, except corn, shall be designated as "new" when inspected prior to September 1, and after that date shall be considered new unless otherwise specified.

The decision of Judge Foster concerning the Kansas City Live Stock Exchange to the effect that that organization is a trust, organized in violation of the Sherman anti-trust law, is causing no uneasiness among the Exchanges throughout the country. It was held by many that the decision would affect all existing board of trade and exchanges.

The EXCHANGES

The members of the Chicago Board of Trade, on September 29, voted on the proposition to amend the rules of the board to make No. 2 Spring wheat deliverable on contracts. The proposition was defeated by a vote of 696 to 328.

It is expected that the rules of the Chicago Board of Trade will be amended so as to cover commission rates on hay and straw. Dealers in hay and straw have been demanding this for some time. As soon as some rule of the Board is up for amendment this one will be tacked on and voted upon.

The directors of the Chicago Board of Trade have rescinded, by a vote said to be unanimous, the resolution of expulsion entered against Murry Nelson in 1894. The act of the Board at that time was due to the refusal of Mr. Nelson to accept a new rule of the Board reducing grain elevator charges from one-third of one cent to one-fourth of one cent per bushel.

The directors of the Chicago Board of Trade have appointed the following members as delegates to the National Board of Trade, which will convene at Washington, D. C., December 14: H. F. Dousman, Richard S. Lyon, Luther W. Bodman, Jerome G. Steever, John C. Hatley, George F. Stone, James Nicol, Wm. S. Warren, Bernard A. Eckhart, and B. Frank Howard.

The members of the Board of Trade of Peoria, Ill., have made very elaborate preparations for the entertainment of the members of the Illinois Grain Dealers' Association, who will convene in that city October 19 and 20. The Committee on Arrangements, as appointed by President James M. Quinn, is as follows: A. G. Tyng, C. C. Miles, B. Warren Jr., Frank Hall and J. M. Quinn.

The members of the Merchants' Exchange of St. Louis, Mo., are again agitating the question of permitting the delivery of No. 2 Hard Winter wheat on contracts. A rule was adopted in 1894 which permitted the delivery of No. 2 Hard wheat on contracts, but it was afterward repealed. The rule is favored by the elevator men and the large traders, but will be opposed by commission men who make a specialty of selling by sample.

The annual meeting of the Chicago Board of Trade Mutual Benefit Association was held recently. A resolution to exclude suicides as beneficiaries was voted down. The report of the Secretary showed 15 deaths, 54 lapses, and 3 resignations during the year, and a total membership of \$48, as compared with \$32 a year ago. During the year \$39,891.99 was paid on death losses, making \$100,102.98 for the five years since the association was organized. The old officers were unanimously re-elected.

The Cincinnati Chamber of Commerce elected the following officers September 14: William McAllister, president; William B. Nelish, second vice-president; Charles A. Hirsch, treasurer, and Charles L. Garner, secretary. The directors are: William F. Robertson, William A. Goodman Jr., H. P. Wiborg, John M. Macdonald, William R. McQuillan. The first vice-president, holding over, is William Hunt. The directors holding over are: Robert H. West, Edwin C. Gibbs, Oscar F. Barrett, Clarence H. Jones, and J. W. Dunn.

The last week of September 1 the directors of the Milwaukee Chamber of Commerce declined to accept the proposition of the lessees of the Smith warehouses to conduct Elevator B as "regular" under the rules of the Chamber of Commerce for the storage of grain, deliverable on contracts, for the reason that the Rialto Elevator Co. is a buyer of grain in the country, and that privilege could not be granted as proprietors or managers of regular warehouses are prohibited from receiving grain on consignment. "We could not comply with this request," said Director Crittenden, "without letting down the bars for the other people operating warehouses here, so the privilege required by the Nye-Jenks Company was laid over until December 1."

The special committee appointed by the Kansas City (Mo.) Board of Trade to investigate the regularity of the Kansas grades since the minimum test weights of Nos. 2 and 3 Hard were lowered one pound each by the Kansas grain inspection department, has handed in its report. The committee found that the reduction, with regard to pre-existing contracts, had made the respective grades irregular. As the Kansas inspection meets with general disfavor, an effort has been made to have Kansas City lines haul grain into the railroad yards of Kansas City, Mo., for inspection. The dealers of Kansas City, Mo., have established standard weights and grades, and they deem the action of the Kansas inspection department as antagonistic to their interests.



A large addition will be built on the brewery at Shawano, Wis.

J. Semucke will build a four-story brick brewery at New Ulm, Minn.

A new brewery will be built at New London, Wis., by Theo. Knapstein.

The West End Brewing Co. will build a new brewery at Erie, Pa.

The F. Fehr Brewing Co. will build an addition to its brewery at Louisville, Ky.

The Gulf Brewing Company, near Philadelphia, Pa., has failed. Liabilities \$57,000.

A new brewery will be built at Derby, Conn., by the Naugatuck Valley Brewing Co.

The Augusta Brewing Co. of Augusta, Ga., has completed additions to its brewery.

A. J. Lynx has organized a company to build a large brewery at North Judson, Ind.

The Wyoming Valley Brewing Co. of Kingston, Pa., has passed into the hands of a receiver.

S. A. Barstow will build a new brewery with a capacity of 8,000 barrels, at Roseland, British Columbia.

James C. McGraw of the Harper's Ferry Brewing Co. of Harper's Ferry, W. Va., has made an assignment.

The Chattanooga Brewing Co. has completed a number of improvements in its plant at Chattanooga, Tenn.

The Sioux Falls Brewing Co. of Sioux Falls, S. D., will build a new brew house, stock house and boiler house.

Hugo Eloesser, of the firm of Wm. Uhlman & Co., hop dealers of San Francisco, Cal., died recently.

New additions are being built to the brick malt house and brewery of the Kewaunee Brewing Co. of Kewaunee, Wis.

The Claus Lipsins Brewing Co. of Brooklyn, N. Y., will make a number of improvements and additions to its plant.

The O. Van Dyeke Brewing Co. of Green Bay, Wis., is building a new cold storage building in connection with its plant.

Alvin Schmidt will rebuild his brewery, malt house and ice houses at Colfax, Wash., which were destroyed some time ago by fire.

Frank E. Peacock, of the Peacock Brewing Co., of Rockford, Ill., died very suddenly in San Francisco, Cal., on September 8 of heart and liver trouble.

The Germania Brewing Co.'s plant at Charleston, S. C., was damaged by fire September 14. The loss amounted to \$15,000, fully covered by insurance.

The Upper Peninsula Brewing Co.'s plant at Marquette, Mich., was burned recently. The fire was caused by lightning. Loss \$6,000; insurance \$4,000.

Pochart & Burke have leased the brewery at New Albany, Ind., owned by Andreas Schlosser. They will make improvements in the plant and operate it.

W. H. Purcell & Co., maltsters of Chicago, Ill., have equipped their grain elevator with a full line of elevating and conveying machinery supplied by the Weller Mfg. Co.

The Weller Mfg. Co. of Chicago, has equipped the grain elevator of Watkins, Frets & Co., maltsters of Chicago, Ill., with a complete line of elevating and conveying machinery.

A patent No. 590,546 for a sprinkling device for pneumatic malting machines has been issued to William Heiser and George J. Meyer of Buffalo, N. Y. It was filed Jan. 6, 1897.

The Ohio Brewers' Association held its annual meeting at Ironton August 25 and 26. The following officers were elected for the ensuing year: L. J. Hauck, Cincinnati, president; Herman Baehr,

Cleveland, vice-president; Percy Andreac, Cincinnati, secretary-treasurer; J. A. Miller, assistant secretary.

The Springfield Brewing Co. of Springfield, Mass., will build a new storage house. The plans for the addition were furnished by the Wilhelm Griesser Engineering Co. of Chicago.

Charles Breittkopf will build a new five-story brewery and four-story storage house at Brooklyn, N. Y. It will be substantially built of brick and iron, and will cost about \$150,000.

The official report of the barley crop of France shows a yield of 15,542,210 hectoliters (a hectoliter is equal to 2 5-6 Winchester bushels), against 16,241,431 hectoliters in 1896.

The Weidman Brewing Co. has been incorporated with a capital stock of \$500,000 to operate the Weidman Brewery at Newport, Ky. The incorporators are Geo. Weidman and others.

The Moerschel Brewing Co. of Sedalia, Mo., has been incorporated with a capital stock of \$40,000. The incorporators are Frank Moerschel, Marie Moerschel, Fred D. Hoefer, and Christian Hye.

The National Brewing Co. of Pittsburg, Pa., has commenced the erection of a new brewery at Allegheny. The new plant will cost about \$200,000, and will have a capacity of 150,000 barrels yearly.

The Iron City Brewing Co. of Pittsburg, Pa., will build a new brew house at Fifty-fourth street and Liberty avenue in that city to cost \$100,000. The new building will be built on the foundation of the old brewery.

Fourteen prominent maltsters of Wisconsin will not join the American Malting Company, but will wage unceasing warfare against the syndicate. It is thought by some that brewers will give them substantial support.

The malt house of Geo. B. Greenway at Clyde, N. Y., was purchased at mortgage foreclosure sale recently by R. M. Schelling of Buffalo for \$6,000. The purchase was made on behalf of the mortgagee, the German Bank of Buffalo.

The Boulder Brewing Co. of Boulder, Colo., has sold its plant to George F. Fonda as trustee and principal creditor of the company. The consideration was \$39,000. It is expected that a new company will be formed to operate the brewery.

The Pittsburg Pure Beer Brewing Co. of Pittsburg, Pa., has been incorporated with a capital stock of \$1,000. The incorporators are J. W. Crider, E. L. Allen, Arthur Hopkins of Allegheny, and Charles J. Andrews and Forrest Nichols of Titusville.

The Phoenix Brewing Company of Louisville, Ky., made an assignment October 4. The liabilities are given at \$250,000, with assets a trifle in excess of that amount. The failure was caused by the filing of a number of attachments by a Cincinnati firm.

The Pennsylvania Brewers' Association, with headquarters at Philadelphia, Pa., has purchased the Arnold Brewery at Hazleton. The consideration was \$200,000, in addition to which the owner, John Arnold, was given \$200,000 worth of stock in the association.

The new Canadian tariff provides for a duty on barley of 30 per cent. ad valorem; on malt, upon entry for warehouse subject to excise regulations, 15 cents per bushel; and upon extract of malt (non-alcoholic) for medicinal and baking purposes, 25 per cent. ad valorem.

Chas. Kaestner & Co. of Chicago, Ill., are making plans for a complete 150,000-barrel brewery plant at Bavaria, Germany. The plant will be built and the equipment and arrangement of machinery throughout will be according to the latest American ideas in brewery construction.

The John Gmnd Brewing Company's plant at La Crosse, Wis., was burned on the morning of September 23. The fire started on the roof and spread rapidly. The malthouse contained several carloads of malt, and about 5,000 bushels of barley, all of which was destroyed. The office building, which

stood across the street from the brewery, was not burned, and part of the engine room was also saved. The brewery will be rebuilt. Loss \$300,000, with insurance of about one-half that amount.

The Uniontown Brewing Co. of Uniontown, Pa., will build a new brewery, and has awarded the contract for the complete plant to Chas. Kaestner & Co. of Chicago. The brew house and mill house will be of fireproof construction throughout, and will have a capacity of 25,000 barrels annually.

The total receipts of barley at Chicago, Milwaukee, New York, Philadelphia, Baltimore, St. Louis, Cincinnati, Buffalo, Minneapolis, Duluth and Peoria aggregated 2,346,691 bushels during September, against 2,298,602 bushels in September, 1896; the shipments aggregated 1,218,813 bushels during September, against 1,037,885 bushels during September, 1896.

The Mendal Block Malt House at Adams, N. Y., owned by W. A. Waite & Sons collapsed in the second floor recently, precipitating the contents to the first floor, which in turn gave way, and the contents of the two floors fell through to the malting floor in the basement. About 6,000 to 8,000 bushels of malt, broken timbers and debris were piled together upon this floor.

A leading Chicago daily, in a recent issue, published an article which stated that brewers' grains were injurious for cattle food and the milk from cattle so fed has been declared unwholesome and dangerous. Facts subsequently came to light which showed that the writer of the article had confounded brewers' grains with distillery slops. Brewers' grains are not distillery slops and are not deleterious as food for cattle. There is a considerable amount of starch and saccharine left in the exhaust barley of brewers' mash, and this feed compares very favorably with other cattle feed. Where corn is used in brewing, additional nutritious qualities are found in the grains. Brewers' grains are sold very extensively to farmers, and analyses made under every condition and tests in feeding have shown that they are not injurious as food or detrimental to the milk product.

A large firm of malsters in Bavaria makes a communication to the Zeitschrift für das Gesamte Brauwesen, respecting growth of malting barley. Finding that the custom of using only the tailings of good malting barley for seed was prevalent among the Swabian farmers, the firm in question makes a point of procuring good seed to supply the local requirements, and places its cleaning machines at the disposal of the neighboring farmers free of charge in order that only well-cleaned seed may be sown. A change of seed from another district is also occasionally provided, to prevent degeneration. Growers are cautioned to stack the barley as dry as possible, and leave it time to sweat properly before thrashing, and they are likewise warned against the practice of cutting the barley before it is ripe, with the idea of getting a better colored grain, since for malting and brewing purposes a fully ripe barley is preferable.

CHARACTERISTICS OF BARLEY.

We have stated that the selection of barley can only be acquired by practice, but an enumeration of the characteristics of good malting barley may be useful to our readers. These characteristics may be divided under two heads, essentials and non-essentials. The former, as the word implies, are absolutely necessary in order that germination may progress satisfactorily. If a sample of grain possesses all the essentials but one, the lack of that one will reduce the quality from the first to a lower grade. The non-essentials are in themselves incapable of constituting a barley suitable for malting purposes, but when present in conjunction with the essentials enhance the quality, extract yielding powers, and market value of the finished malt.

The essential characteristics are as follows: Ripeness or maturity, dryness, sweetness, and freedom from grown, damaged and heated grains. Maturity is of particular importance as unripe barley will not germinate satisfactorily, neither are the interior constituents in a suitable condition for true modification to take place, and the finished malt lacks tenderness and character. Damp barley also fails to germinate satisfactorily, and its vitality, instead of increasing with reasonable storage, as is the case with dry barley, is seriously affected. There is also considerable danger of damp barley becoming moldy and developing an objectionable smell. Of course, temporary dampness may be overcome by kiln-drying, but it is unwise to select such material, as retrograde change may have commenced, and then no amount of manipulation will remove the evil effected.

It is well for maltsters to remember that kiln-drying barley, as in the case of kiln-drying slack malt, will only prevent further deterioration, it cannot remove the effects of past deterioration. Musty or other objectionable smells indicate that the barley has been stored under unfavorable conditions, and in all probability vitality will be impaired. The presence of grown, damaged and heated grains is

most objectionable, if the percentage of the grains is high the sample must be classed as second grade, even if all the other essential characteristics are present. Grown grains are easily detected, and indicate that the corn has suffered from excessive moisture in the harvest field.

Damaged grains are also readily detected; they are frequently caused by careless thrashing. In order to dress the barley close, so as to make it look bolder and more compact, the corn is forced through close set machinery, and as a consequence splitting, husk abrasion, and other injuries result. Heated grains are caused by the heating of the grain in stack or storeroom, owing to the presence of excessive moisture. This defect is most prevalent during precarious harvest times, when farmers are afraid to leave the cut grain long enough to ensure perfect drying. Heated grains are dark and stained, and in appearance are somewhat similar to grains weathered in the field, although, by a barley judge, the two classes may be easily distinguished. Heated and grown grains rarely germinate properly, and in extreme cases not at all. Broken and damaged corns distinctly favor mold formation.

The non-essential characteristics are, size, weight, regularity and freedom from dirt and foreign seeds. The advantages of size and weight are obvious to all. Regularity is, perhaps, the most important of the non-essential characteristics. Lack of uniformity in the size of barley often leads to irregularity of germination. Small grains are more quickly soaked than large ones, and consequently growth in the former is apt to commence upon the latter. Of course, proper grading machinery quickly overcomes all defects of size. Dirt and foreign seeds are very undesirable. Under the heading of the former we include dust, stones, etc., and under the latter all seeds or grain other than barley. The former is usually removed by screening. Foreign seeds are detrimental in proportion to any unpleasant flavor or aroma they may impart to the wort.—Country Brewers' Gazette.

The malt houses now under the control of the American Malting Co. are reported as those formerly owned by the Milwaukee Malt and Grain Co., the Kraus-Merkel Malting Company, the Hanson Hop and Malt Company of Milwaukee, Wis.; A. Schwill & Co., Garden City Malting Co., W. M. Purcell & Co., Hales & Curtiss Malting Company, Brand, Bullen & Gund Company, John Garden Jr., Chicago; Pneumatic Malting Company of Chicago, Ill.; C. W. Warner Company of Syracuse, N. Y.; estate of Charles G. Curtis of Buffalo, N. Y.; Howard Northwood Malt Manufacturing Company of Detroit, Mich.; Schnegen Malting Company of Hamilton, Ohio; L. L. Aaron & Co., and J. Weil Malting Company of Pittsburgh, Pa.; William Buckhert Malting Company of Watertown, Wis.; estate of Jacob Weschler of Erie, Pa.; W. D. Mathews Malting Company of Le Roy, N. Y.; C. A. Stadler and the New York Malting Co. of New York City. It is estimated that during the past five years of depression these houses have earned net about \$1,300,000 per annum on a competitive basis. It is the opinion of nearly all in the trade that the net earnings by reason of reductions in the cost of administration, etc., can be increased at least \$1,000,000 per annum. The company was incorporated September 28, under the laws of New Jersey, with a capital stock of \$30,000,000. The head offices of the company are located at No. 50 Broadway, New York City. The officers of the company are as follows: President, A. M. Curtiss; first vice-president and general manager, C. A. Purcell; second vice-president, E. R. Chapman; general superintendent, Seymour Scott; secretary, John J. Treacy; assistant secretary, John F. Martin; treasurer, E. R. Chapman; assistant treasurer, C. H. Eicks; directors, A. M. Curtiss, A. C. Zinn, C. M. Warner, C. A. Stadler, Seymour Scott, R. Nunnemacher, Theodore Hansen, Charles Johnson, C. A. Purcell, E. R. Chapman, D. D. Weschler.

The Pacific Coast exported nearly five million dollars' worth of wheat and barley in September.

A London statistician has been looking up the records and has made a diagram showing the annual variation in the price of wheat since 1641. The most remarkable fact disclosed by his investigations is that the price rises and falls with great regularity every four years, and he explains that the phenomenon is due to the fact that when the market has been good farmers have planted an increased quantity, thus making a larger supply and forcing prices down again. The average price in 1895 was 23s. 1d. a quarter, or 70 cents a bushel, and in 1896 26s. 2d., or 88 cents a bushel. The highest price ever known for wheat occurred in 1812, when it sold for 126s. 6d. a quarter, or about \$3.85 a bushel. The lowest price was in 1743, when it fell to 22s. 1d., or 69 cents a bushel, although it should be remembered that the value of money was very much greater in those days than now. Wars in any part of the earth have invariably increased the price of wheat. The most rapid advance ever noted was in 1799, when the career of Napoleon was at its height. Wheat went from \$2 to \$3.50 a bushel in a few months.

Items from Abroad

According to official crop estimates of France the country will have an acreage of oats of 9,986,000, producing 30,050,000 measured quarters, against an acreage in 1896 of 9,672,000, and yield of 31,730,000 quarters.

Spain imported 52,000 quarters of wheat, and exported 23,000 sacks of flour during July. The net importation of the two breadstuffs during the season ending with July amounted to 620,000 quarters, against 366,000 quarters in the previous season.

Russia's total shipments of flaxseed from January 1 to September 11 amounted to 1,186,880 quarters, against 875,130 quarters during the same period of 1896. The total shipments of Russia from Sept. 1, 1896, to Sept. 11, 1897, amounted to 3,859,680 quarters.

The total shipments of wheat of Argentine Republic from January 1 to September 11 aggregated 507,500 quarters to the United Kingdom, and 367,000 quarters to the Continent, making 874,500 quarters, against 1,210,000 quarters during the same period last year.

The imports of Holland during August included 575,000 quarters of wheat, and 89,000 sacks of flour. The exports included 499,000 quarters of wheat, and 13,000 sacks of flour. The net importation of wheat and flour amounted to 139,000 quarters, against 165,000 quarters in August preceding.

The Italian Government is watching closely the movement in favor of the suspension of duties on grain, and the agitation in the other direction which is being carried on by agriculturists. The belief prevails that the Government in any case will not consent to any suspension of the duties on cereals.—Reuter.

American grain has arrived at Vienna via Rotterdam and the Danube. These first arrivals consisted of three barge loads only, and therefore the quantity is not important, but as this is the first time that American grain has reached the Austrian capital the fact is worthy of note.—Corn Trade News, September 28.

The total shipment of wheat of Argentine Republic to Europe, from January 1 to September 28, amounted to 212,000 quarters, against 2,154,000 quarters for the same period last year, and 4,460,000 for 1895. Of maize the total shipments from the beginning of the Argentine maize year amounted to 571,000 quarters to September 28, against 2,902,500 quarters for the corresponding period of last year.

The London Produce Clearing House, Ltd., has signified its intention through its manager, Wm. Schultz, to renew its endeavor to establish a London Terminal Market in wheat. A mode of operation has been suggested as follows: To deal in American wheat on the basis of No. 1 Northern Duluth Certificate in quantities of 4,800 centsals at a price per 100 pounds ex store in London. Seller may deliver at contract price No. 1 Hard Duluth, Duluth Certificate, or No. 1 Hard Manitoba, Dominion Certificate, and shall have the option of tendering any other sound wheat (instead of American Red Wheat) with a penalty of 3 pence per cental, besides its differential value from basis as certified by experts.

Belgium imported 394,500 quarters of wheat during August, against 255,000 quarters in August, 1896; 46,000 quarters of rye during August, against 6,500 quarters; 152,500 quarters of barley during August, against 47,700 quarters; 46,000 quarters oats during August, against 46,000 quarters; 241,000 quarters of maize during August, against 148,700 quarters; 5,200 sacks of wheat flour during August, against 10,000 sacks; 10 sacks of rye flour during August, against 150 sacks during August, 1896. The exports during August amounted to 108,000 quarters wheat, against 108,000 quarters in August, 1896; 17,500 quarters rye, against 11,500 quarters; 28,800 quarters barley, against 14,600 quarters; 500 quarters oats, against 2,800 quarters; 81,500 quarters of maize, against 34,200 quarters; 12,200 sacks of flour, against 5,600 sacks; 240 sacks of rye flour, against 80 sacks.

A far seeing British contemporary has found another grain-growing country, which will drive American grain from the markets of Europe and Asia. The British Baker says: "The trans-Siberian railroad will open up the future granary of the world. An expanse of 4,000 miles of wheat-growing country, added to the producing capacity of this round earth of ours, is a big thing. The great line of railroad the Russian Government is building through Siberia will be opened through its entire length by the year 1900. One terminal will open near the Chinese coast, and wheat grown in Siberia can easily be shipped, not only throughout China, but can be exported into Japan, to both of which places America now sends considerable wheat and flour. Then from the western terminal of the road wheat can be rushed to France and Germany, and even to England, at much less cost than from the United States." How very unfortunate for the British editor; he has

permitted his prejudice to run away with his judgment.

The shipments of flaxseed from all countries from January 1 to October 1 have aggregated 1,217,000 quarters for the United Kingdom, and 1,791,000 quarters for the Continent, making a total of 3,008,000 quarters, against 1,609,000 quarters for the United Kingdom, and 2,066,000 quarters for the Continent, making a total of 3,675,000 quarters for the same months of 1896.

Russia's exports of wheat from August 1 to September 18 amounted to 2,338,100 quarters of wheat (of 480 pounds each), against 1,314,700 quarters for the same period of 1896, and 1,828,000 quarters for the same period of 1895. The exports of rye amounted to 804,100 quarters (of 480 pounds each) from August 1 to September 18, against 647,600 quarters for the same period of 1896, and 718,000 quarters for the same period of 1895. The exports of barley amounted to 1,410,100 quarters (of 400 pounds each) from August 1 to September 18, against 1,117,600 quarters for the same period of 1896, and 1,416,000 quarters for the same period of 1895. The exports of oats amounted to 805,100 quarters (of 304 pounds each) from August 1 to September 18, against 1,153,000 quarters for the same period of 1896, and 1,326,000 for the same period of 1895. The exports of maize amounted to 138,000 quarters (of 480 pounds each), against 79,000 quarters for the corresponding period of 1896, and 81,700 quarters for the corresponding period of 1895.

CHAFF

Illinois grain dealers will meet in Peoria October 19 and 20.

The Irrigation Congress, recently held at Lincoln, Nebr., serves to emphasize the fact that efforts are constantly being made to transform the arid portions of the West into grain fields.

During the month of September Baltimore shipped abroad 3,160,716 bushels of wheat, 2,296,342 bushels of corn, 285,000 bushels of oats and 67,414 bushels of rye. The value of the fifty-six grain cargoes was over four million dollars.

It is said one hundred new elevators have been erected, or are in process of erection along the line of the Southern Minnesota Railroad. In Martin County five new elevators have been built this year, and four flat warehouses have been changed into elevators.

According to the implement papers, the demand for grain drills has been unprecedented this season. How far the drouth has interfered with the general disposition to put in more winter wheat can hardly be determined as yet. The demand for seasonable machinery shows that the winter wheat farmers intended to put in an enormous acreage.

A queer thing is that this No. 1 Northern seems to be coming from Iowa, a quarter which was not supposed to be growing any of that sort of grain. Experts say that it is really a hard spring wheat which has heretofore been graded by the department as No. 2 Spring, but which can be rightfully classed as No. 1 Northern.—Chicago Times-Herald.

James Russell, a private grain inspector of Kansas City, Mo., was arrested October 5 on a warrant charging him with inspecting grain on the Kansas side of the state line without legal authority and in violation of the Kansas state grain inspection laws. W. W. Culver, who was recently appointed by Governor Leedy to the position of grain inspector, swore to the warrant that caused Russell's arrest.

Hardly less important than the shortage in wheat crops abroad, in its influence on the price of wheat here, is the partial failure of the domestic potato crop of 1897. The American Agriculturist reports that blight, rust, rot and insects have greatly reduced the yield, particularly in the heavy potato sections of New England, New York and other states of the Middle and Central West, although the situation is rather more favorable in the Northwest, in the Rocky Mountains and on the Pacific Coast.

The indictment of the bucket-shop keepers is of interest not to the Board of Trade alone but to the whole community. No more insidious form of gambling than that practiced in these places, and none more ruinous to the victims, has ever been tolerated by the police. Where the faro bank despoils hundreds the bucket shop plunders and ruins the lives of thousands. Its ravages are not confined to one city alone, but extend to every town and village for hundreds of miles around. The keepers make vast sums of money, and so powerful have they become that when one of them was indicted in Iowa the governor of this state put his protecting arms around the culprit and impudently refused to honor the requisition of the Iowa governor.—Chicago Post.



PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY

MITCHELL BROS. COMPANY

(INCORPORATED.)

OFFICE:

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

A. J. MITCHELL, - - - Business Manager
HARLEY B. MITCHELL, - - - Editor.
CHARLES S. CLARK, - - - Assistant Editor

Subscription Price, - - - \$1.00 per Year.
English and Foreign Subscription, - - 1.50 " "

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching persons connected with this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., OCTOBER 15, 1897.

Shippers who sell on track could avoid much trouble by selling grain i. o. b. at point of shipment. If it is sold i. o. b. point of destination the shipper will be worried about freight rates, delays in transit and misrouting.

Mark the weight of your grain and the car initials on a card and tack to the inside of each door. It will enable the receiver to detect a shortage and look for the cause before the grain has left the scale hopper and lost its identity.

The season of canal navigation is drawing to a close and the Buffalo elevator pool is already threatening the grain trade with a blockade. The new independent elevators, however, will do much to relieve any congestion which may occur.

The Nebraska State Board of Agriculture reports that the grain acreage of the state next year will be about a third larger than this year. It is premature to figure on next year's acreage of grain, but there is no mistaking the encouraged state of agriculture in Nebraska as a result of this year's magnificent crops.

The Kansas Grain Dealers' Association is determined to secure accurate weights at Kansas City and should be given the hearty support of every regular dealer of the state. By joining the Association they will also help to discourage receivers and dealers at central markets sending bids to farmers or transient buyers.

The terminal elevator men who clean grain generally charge for the service or else dock the shipment enough to repay them for their trouble. They have large properties to maintain and cannot afford to operate them for nothing. If country shippers would clean their grain at home they would know it was well done and

the cost of cleaning would be much less. Besides they would save the freight on the dirt they ship.

It has been so long since any additional markets were included in the official visible supply reports that the "invisible" at prominent markets is large enough to merit immediate attention. All should be included in the official report: the gray-haired heresy about destroying the comparative value of the reports should be cast to the winds.

A Chicago grain shipper, who evidently is cross-eyed or prejudiced against the rail carriers, insists that freight rates are being cut. In view of the fact that Senator Cullom's Interstate Commerce Law expressly forbids such cutting, it is clear that the shipper has been misinformed. It is impossible for large shippers to get lower rates than small shippers, because discrimination is expressly forbidden by law. If the law was weak all grain shippers of the country would join the Grain Dealers' National Association and give it influence enough to induce Congress to strengthen the law. Such discrimination would soon drive the small shippers out of business, hence it is unreasonable to suspect they are tolerating such discrimination.

"A VINDICATED PROPHET"—PERHAPS.

We harbor nothing against C. Wood Davis, the Kansas statistician. Possibly we have made merry over his boundless faith in figures, especially his own figures; but there was nothing malicious in the merriment. Consequently we hope to be forgiven if we mildly suggest that Mr. Davis is not yet "A Vindicated Prophet," as he has been termed of late in the papers. His vindication consists essentially of an article from his own pen in the Forum on "The Impending Deficiency of Breadstuffs." In this article he goes over the familiar ground once more, showing that the production of bread-eating people is at a greater ratio than the production of wheat, and that the world will soon face an acknowledged deficiency with only one or two possible additions to the available grain acreage.

Now, one swallow does not make a summer, and one season of high prices for grain is no proof whatever that the predicted deficiency has arrived. Mr. Davis' reputation as a prophet is "vindicated," only on the assumption that his last prophecy is correct. We might have several years of high prices without proving his theory, which is practically that of Malthus, that population tends to press upon sustenance. We would like to see Mr. Davis' prophecy verified, so far as it would put agriculture on a better basis; but we take no stock in Malthusian or statistician theories. All such theories make man a grasshopper with no ability to help himself. With an average production of about 12 bushels per acre of wheat, when 30 is possible, the world won't need so many wheat fields; and besides, man has usually managed to help himself and starvation has never been the rule. Until we see the price of wheat mounting higher, year by year, excuse us, but we shall continue to regard Mr. Davis as an entertaining theorist and not a vindicated prophet.

DECADENCE OF COUNTRY GRAIN MARKETS.

The discussion that has been going on in the local papers of Ottawa, Ill., over the decadence of that city as a primary grain market, is interesting because it is typical. Scores of towns make the same complaint and the blame is commonly placed on the railroads, the merchants or the grain dealers, and occasionally on all three. We intimated last month that in all probability it would be found that Ottawa was simply in the increasing list of towns that have had to divide up their grain trade with other towns, simply because the farmer consults his convenience and goes to the nearest station. The Ottawa Free Trader demurs to this and cites cases where farmers go to the more distant station to the detriment of Ottawa. And as a cure a merchants' elevator was suggested, the intimation being that the local grain dealers were in a pool and paid lower prices than competing stations.

Of course we are not advised as to the exact conditions in the territory around Ottawa, but we felt sure enough of the ground to demur to the charges of the local papers. It appears on inquiry that there is no discrimination against Ottawa by the Rock Island and Burlington roads. The territory is within a hundred miles of Chicago, and the rates are not high enough to give one dealer a chance to offer more for grain, because of better rates, even if he was a favored shipper. As to the charge of a pool and the proposition to start a merchants' elevator, a local dealer promptly offered to sell his warehouse on favorable terms. It is probably true that the local dealers in Ottawa all pay about the same prices for grain, for their prices are all based on Chicago quotations, plus freight. One instance we personally know of, having investigated it, shows how easily a reputation for paying high prices may be acquired, just as the butcher got a reputation for selling sausage cheap, though he had no sausage to sell. It was rumored in Ottawa one day that a dealer in a neighboring town was paying 29 cents for corn, though the Ottawa dealers were paying only 27½ cents. As a matter of fact, the dealer in question had paid 29 cents for a couple of early loads on his own judgment, probably, as to the course of the market, but his first dispatch from Chicago put the price to 27½, which was what the Ottawa dealers were paying.

As we stated last month, there is little opportunity in localities so near Chicago as Ottawa and the surrounding stations for any extraordinary inducements to farmers to take their grain to this or that station in preference to their natural market. A dealer who holds out such inducements is pretty likely to get into trouble, for the inducements are taken from his legitimate profit. One dealer at a station near Ottawa, who had the reputation of paying the top price, has failed since this discussion arose. We don't know that he paid too much for his grain, but it looks that way.

In the course of the discussion in the local papers a farmer, in reciting his experience in trying to dispose of some produce, throws out a hint that people who want the farmers' trade ought to utilize. A local market ought to be ready to take anything that the farmer has to sell, from hides to hay. That is the sort of a

market a farmer likes. The elevator man cannot do all this; the merchant must do something toward handling the produce. Some elevator men have feed yards so that they can pay some sort of price for any sort of grain or feed stuff, even if damaged. The certainty of a cash market for anything, even damaged grain, is a great card with farmers.

WORK OF A COUNTRY BARN BUILDER.

Country barn builders are not the proper men to entrust with the building of elevators intended for storing heavy loads of grain. These tyros have given no study to the strains to which such a structure will be subjected, or to the convenient arrangement of them. Economy in operation is a thing they are not interested in; the completion of the structure is what they long for. One of these brilliant cowshed architects was entrusted by an Illinois elevator man with the setting up of a corn sheller. He put it up so it run, but it did not shell much corn and required more power than was expected. The elevator man never passed the sheller without saying kind words about the maker who swindled him, and finally his dissatisfaction with the sheller became uncontrollable and he ordered a sheller of another make. The millwright who took out the old one explained that it had been run backward; the elevator man has been confined to his bed ever since.

A BUSHEL OF EAR CORN.

Indiana dealers are being caused some uneasiness by the reenactment, with strengthening clauses, of an old law making 68 pounds of ear corn the legal weight of a bushel in that state. Ohio has a law fixing the legal weight at 68 pounds also, but the other states, with the single exception of South Carolina, have made the legal weight 70 pounds. South Carolina's legal weight of a bushel of ear corn is 72 pounds. Even Kansas, which is governed by farmers, requires 70 pounds for a bushel of ear corn.

It is as impracticable to attempt to fix the weight of a bushel of ear corn as to fix the weight of hogs. The aim in fixing the weight is to have the buyer pay for corn only, and 70 pounds of ear corn is supposed to represent 56 pounds of corn, plus cobs and moisture. The weight of cobs varies with different seasons and with different times of each season; it is not fixed by nature and is beyond the control of man. Some seasons the cobs are so large and contain so much moisture that less than 50 pounds of corn could be got from 70 pounds of ear corn.

We have known of buyers taking as high as 85 pounds of ear corn for a bushel at the beginning of the season, and the farmers did not kick either. The corn contained so much moisture the buyer could not sell it, hence would have to keep it until it was dry. An equitable way of determining how much ear corn of any crop will shrink is to place 100 pounds of it in each of ten sacks and store them for a month in a warm office or in the boiler room. Then by shelling the lot and weighing the shelled corn and the refuse, the percentage of shrinkage, by evaporation and by shelling, can easily be found.

This method is fair to all parties and can be adopted by sellers and buyers regardless of legal weights.

The latter part of the summer has been so dry in most of the corn-producing territory that this year's corn will not contain an average amount of moisture, still no buyer can afford to establish a precedent by accepting 68 pounds as a bushel.

Indiana dealers can get around that fool's law making 68 pounds of ear corn a bushel in that state by refusing to buy by the bushel. Abandon the use of the word bushel in buying ear corn and quote prices at so much per 70 pounds. Let a "seventy" be the standard unit of measure in buying. The dealers must give 70 pounds when they sell outside the state, hence it would be the height of folly for them to accept 68 pounds unless they reduce the price to conform to such weight. By paying one cent less than they could afford to pay for 70 pounds, the Indiana dealers would quickly bring the farmers to their senses. The inconvenience of dealing with corn in two measures might be worth more than a cent a bushel, if so, the dealers should charge it.

STORING GRAIN AT COUNTRY STATIONS.

The storing of grain at country stations in the older states has never received much attention from the elevator men. They have stored grain free in many cases and gave little heed to how long it remained in store. Some have gone into the cellar and cursed the custom vigorously and others have shipped out the grain, but few, if any, have corrected the abuse. The principal reason country elevator men are imposed upon in this respect is that they do not work together enough. They have great need of combined effort. Competition is generally so intense as to discourage the average country dealer from even attempting to make any innovations in his business.

In some sections elevator men have actually stored the farmers' grain free until the first of May, while others have had the temerity to limit the free storage to periods of three months. We have recently learned of an Indiana elevator man who seems to be a little braver than his fellow sufferers. He has put his foot down on "free storage forever," and announced that henceforth he will give storage and insurance free for thirty days, but after that period he will charge one-half cent per month or any part of a month. If he will stick to it, this will be a step toward reform, although the free storage and insurance for thirty days is almost certain to induce each farmer to hold his grain that length of time for a rise.

It is encouraging to note that he will charge interest on money advanced to the farmer and hold no corn after March 15. It is to be hoped that some of the neighboring dealers will join the elevator man who has proved himself brave enough to take this step and help him to put the storage business on a business basis. Ten days is enough free storage, and then it should be at owner's risk. The trouble of securing an adjustment and settlement of fire loss is no small job, and sometimes it is impossible to secure either. The default of the insurance company would not relieve the elevator man; he

voluntarily agrees to give insurance free and must make good the loss. Such a gift might bankrupt many elevator men.

REGULAR DEALERS MUST ORGANIZE.

Some of the principal supporters of the Grain Dealers' National Association seem to be a little discouraged because the regular grain dealers do not come forward and support the Association as they should and as the real needs of their business demand. One writes, "The average country dealer expects a few to give their time and means for their benefit, and yet are not willing to put up a small amount of annual dues to keep it going."

It must be admitted that the country elevator men have been remarkably backward in joining and helping along this organization, which is designed primarily to promote and protect their common interests, but it could hardly be expected that all would apply for membership as quickly as they learned of the organization. Organized effort is quite new to many sections and it will require some time to educate the regular dealers of those sections to the advantages of joining an association. Few of them understand the intent or purpose of it, but as soon as it is explained to them and they are solicited to join, doubtless they will gladly contribute their time and support to the organization. By the proposed affiliation of the local and state associations with the National, it will be materially strengthened and the trade insured an organization that will be a credit and a profit to it.

It requires much time and persistent effort to build up a business, so, too, does it require time and hard work to make a grain dealers' association a success. It cannot be done in a day, week, month or a year, but patience and persistence will surely bring it about. In fact, there is no way around it; it is absolutely necessary that the trade have an organization to guard and advance the common interests of its members. Nearly every other line of business is well organized and has competent and alert agents watching for opportunities to promote the common cause. Unless regular dealers profit by the many examples of other trades and get together, they must expect to bear unnecessarily many burdens and to tolerate many galling impositions. Their reward will be a reward of barren regrets.

FORCED TO QUIT BY DISCRIMINATION.

An Atchison grain company which has long operated an elevator at that point, and until recently quite successfully, has thrown up its lease and retired from business, because the Missouri Pacific and the Santa Fe discriminated against it to the extent of five cents a bushel. Submission to such treatment will encourage the railroad managers to ignore the rights of grain shippers. If they would combine and fight for equitable rates it would be possible to continue business regardless of traffic managers. It is necessary for the shippers to organize and stick together in order to get justice. It is to be hoped they will not defer too long. Every state should have an active organization.

EDITORIAL MENTION

Cooper well your cars and reduce shortages.

A clean elevator is detested by grain infesting insects.

Barley inspection should be improved or abolished. The present grading is not heeded.

Join a grain dealers' association and help to advance the common interests of regular dealers.

The new Kansas grades are meeting with some opposition. We will publish them in our next number, together with an explanation from Chief Inspector Culver.

Indiana elevator men should wake up and declare for or against the organization of a state association. When organized they can easily secure relief from common burdens.

The dealer who always believes farmers' stories about the higher prices paid for grain by his competitors will be required to turn his elevator over to the sheriff ere many days.

The dealer who pays top prices for wheat mixed with rye will lose money as well as his temper when he sells it. By paying feed prices for the mixture the dealer is safe from loss.

St. Louis feels much better satisfied with its grain receipts since the traffic commission got to work. A number of discriminations against St. Louis have been corrected.

The sensational newspapers continue to publish reports and denials of the dissolution of the Buffalo elevator pool, and it continues to levy heavy taxes upon all grain passing that way.

The metric system has taken another step forward in the United Kingdom, and doubtless its use will be enforced before 1900. If America would adopt the system at the same time the grain trade would be greatly facilitated.

Ohio grain dealers should join in with those who are fighting the nonsensical law prohibiting use of grain testers of less than one-half bushel capacity and have it knocked out in the courts. The farmers will next want 55 pounds of wheat made a bushel.

The Cincinnati, Hamilton & Dayton Railroad Elevator Co. of Toledo, Ohio, advertises its storage charges and rules in this issue. Its reasonable rates and sensible method of making them known to the trade ought to meet with adequate reward in increased business.

In Minnesota the state establishes storage rates for country elevators and prescribes a form of certificate to be used. In the older states the elevator men are not so fortunate as to have state regulation. Many of them give no certificate, but they give storage free. If the states would enact laws requiring the country eleva-

tor men to charge for their services more of them would make a living.

The coal strike did much to reestablish the utility of the corn cob as a heat generator. Several Illinois elevator men made a good thing by the unexpected demand, and in some places the price of cobs rose to 50 cents a wagonload. In some markets they are always a drug at 25 cents a load.

One of the most interesting features of the Peoria meeting will be the crop report compiled by Secretary Tyler. He has received hundreds of reports from dealers in all parts of the state, so will have a report that the trade can depend upon. Every regular dealer should make sure of attending.

We don't seem to get to the bottom facts about that cargo of No. 1 Northern wheat shipped to the Argentine. It was given out that the wheat was intended for seed, but the Review of the River Plate intimates that it was ordered by a miller at Buenos Ayres. This is more surprising than the original rumor.

Duluth dealers have finally discarded the carload as a measure and henceforth will deal in grain by the bushel exclusively. This is sensible, for by so doing they remove an active trouble maker. A bushel is 60 pounds, but a carload—well, it is anything from 500 to 1,200 bushels, depending upon the market at the time car is loaded.

Peoria grain dealers and merchants are making a vigorous fight against the displacement of Board of Trade inspection by state inspection and have every chance of winning. No inspection or weights stand higher in the estimation of country shippers than those obtained at Peoria, and a change would be likely to prove detrimental to the city's grain trade.

St. Louis wants to become the market for hard winter wheat and thinks it can get the trade by establishing a market for futures in hard wheat with a contract grade. As a matter of fact, there is practically little demand for a future market in Kansas hard wheat, as it is a cash trade. The prominence of St. Louis or any other city in that sort of a trade depends almost wholly on going out and bringing it in.

The peculiar case reported from McLean County, Ill., where rats ate the corn from the cob while the stalks were still standing is duplicated from the vicinity of Barberton, Ohio. Perhaps this is the beginning of the solution of the evil. It often happens that things must grow worse before people will combine to make them better. Possibly if the country is to have a plague of rats a general crusade of extermination will be inaugurated against the rodents.

The idea that Siberia will eventually become a competitor in the world's wheat markets is shattered by Prince Krapotkin, who substantially indorses the statement made by C. Wood Davis in the October Forum, that Siberia will never produce enough wheat for home consumption. Further, the prince says that the export capacity of Russia in the matter of cereals is greatly exaggerated. We presume he means

that if internal communication were easy in Russia, much of the grain now exported would be consumed at home. This is doubtless true and is something which must be counted on in any view of the future of the world's grain trade.

Several country dealers have suffered recently at the hands of the local telegraph operator, who was so avaricious he could not resist the temptation to sell quotations to the dealer's competitors at a low price. Of course the telegraph company discharged the operator, in each case, as soon as his breach of duty was detected, but this did not recompense the regular dealer for the damage done. Most dealers use a cipher, which is the only safe way to conduct the grain business.

The trunk lines seem to be determined to increase their earnings and, acting through the Joint Traffic Association, have decided to advance the rate on grain, Chicago to New York, to-day to 22½ cents. This is higher than it has been before for several years. If the rates are maintained on through grain, which is very doubtful, the export grain trade will decline enough to bring about a reduction or secret cuts to large shippers. As usual, the interior shipper will pay schedule rates.

Out at Garfield, Washington, one of those interesting exhibitions of human folly, known as a fight for grain, was indulged in by the dealers. It is said that the Northern Pacific backed one party and the O. R. N. Railroad the other. That is a matter of secondary concern. The main fact is that the price of wheat was run up ten cents a bushel more than the market justified. Perhaps bankrupt railroads can afford the luxury of that sort of a contest to get grain—they only have to earn salaries—but grain men cannot.

Agricultural depression is almost as serious a problem in Germany as in England, but the remedies proposed by the Agrarians all look to shutting out competition from foreign countries. Something unique has been injected into the discussion by a recent book written by a clergyman, Pastor Goehre. He attacks the antiquated methods of farming, the unprogressive character of the rural population, and jumps with both feet on the landed aristocracy for their treatment of their tenants, their extravagance, etc. And he suggests the overthrow of the landed aristocracy as the first step toward redeeming agriculture. Very naturally the book has made a sensation.

Two rather remarkable estimates of the wheat crop are those of Mr. Snow of the Orange Judd Farmer and Mr. Thoman, both of which have been made public this month. Mr. Snow figures out that the yield of winter wheat is 373,630,000 bushels, and of spring wheat 215,470,000 bushels, or a total of 589,000,000 bushels. Thoman's report makes the yield 580,000,000 bushels. The government report indicates 477,000,000 bushels. There is a most awful gap between the government and Messrs. Snow and Thoman. How would it do to take all the reports, add them up, divide by the number of reports, and thus get the average? In this case the average of the three would be 549,000,000

bushels. We would just as lief bet on this as any of the others, especially as there is nobody competent to decide the bet.

Whenever grain dealers get together they should adopt resolutions, calling upon their representatives in Congress to secure the amendment of the Interstate Commerce Law so as to stop the rank discrimination indulged in by rail carriers. The rates given to regular grain shippers should be uniform, and must be if the small shippers are to continue in business. If any discrimination is to be indulged in, it should be in favor of the elevator men who provide freight depots for bulk grain with their own capital and without recompense from the carrier benefited.

R. R. Cordner of Middletown, N. Y., wants a partner in Ohio, Indiana or Illinois who can ship oats and corn in car lots via Erie Despatch and Ontario Despatch lines on orders from Middletown, terms sight draft with bill of lading attached. Mr. Cordner has been handling grain, feed, flour, etc., in Middletown for many years and is well acquainted with all the trade in Orange, Sullivan and Delaware counties. It seems that such an arrangement might be made mutually advantageous to both parties. Anyone seeking an Eastern connection might find it to his interest to correspond with Mr. Cordner.

THE KANSAS CITY LIVE STOCK EXCHANGE DECISION.

The opinion handed down by Judge Foster of the United States District Court on September 20, in the Kansas City Live Stock Exchange case, has aroused a great amount of interest from the supposed far-reaching results involved. The case has been appealed to the Supreme Court by the Exchange, though it first goes to the Circuit Court of Appeals, which is asked to certify it to the U. S. Supreme Court for trial. Pending the result of the appeal, the Exchange of course continues in business.

The case in question was brought by the U. S. District Attorney nearly a year ago when the firm of Greer, Mills & Co. was ousted from the Exchange. The point at issue was whether the rules of the Exchange did not constitute that body a trust within the meaning of the Sherman Anti-Trust Law. The matter hung principally upon Rule 16 of the Exchange, which prohibits any member from dealing with any person violating any of the rules of the Exchange, or an expelled or suspended member, after notice of such suspension has been issued by the Secretary or Board of Directors. Judge Foster stated that the evidence showed that non-members were treated exactly the same as expelled or suspended members, and that as a matter of fact no one could do a live stock commission business without joining the Exchange. He decided that this was a boycott on all outsiders, and as such an infraction of the law.

It is evident from the language of Judge Foster that he has a prejudice against all commercial exchanges, and his decision, if sustained, would probably make most of them monopolies or trusts until some of their rules were changed. He says as much in his decision. But we imagine that even should his decision stand, it would

not be a difficult matter to so amend rules as to avoid an infraction of the law. The advantages of commercial exchanges are so well understood that few men would try to engage in certain lines of business without membership. Should all such rules as that of the Kansas City Live Stock Exchange, cited above, be abrogated, there would still be a practical boycott on outsiders in existence, caused by the disadvantages of their doing business in a way different from the vast majority of those in the same business, with fewer facilities every way. While interest in Judge Foster's decision has been widespread, nobody anticipates that business must be revolutionized because of it.

Some months ago the Chicago Board of Trade decided to remove No. 2 Spring Wheat from the list of grades deliverable on contracts, the change to take effect October 1. The mixers and the managers of grain hospitals soon set to work to have the rule changed again, so as to permit them to deliver No. 2 Spring, of which they have made millions of bushels during the last year. The Directors were finally induced to submit the question to another vote, and No. 2 Spring was knocked out by a larger vote than ever. It is deliverable on contracts no more, and accordingly the mixers are sad at heart.

The newspapers have been telling some marvelous stories of a new variety of corn. Dempsey Waggy, a farmer in Madison County, Ind., while hunting in Arkansas, was present when some scientists opened a prehistoric mound. In the mound sealed jars containing corn were found, and he was given a handful. He took them home, planted them, and lo! the stalks grew twelve feet high. Each stalk produced from four to six ears and at that rate would produce about 250 bushels per acre. Now this is all very well and reads smoothly; but here comes another party, and a woman, too, Mrs. Bean of Charlestown, Ind., who also planted some of this prehistoric corn. The return from this planting is said to be corn that averages two ears of ordinary size to the stalk with grains of a dirty brown color. And nothing is said about the surprising height or yield of the corn.

The total receipts of wheat in Tacoma by rail during the month of September were 1,721 cars; for the corresponding month in 1896, 429 cars, and for September, 1895, they were 519 cars.

Car stealing from other roads has developed into a fine art with some railroad officials. Omaha boasts of an expert at the business. He corrals all the empty cars he can find, rushes them out into Nebraska, loads them up and then delivers them to the rightful owners, who get the haul of the grain from Omaha. But to get this business they practically have to loan their cars for the use of the western road. The recent heavy grain shipments gave a great impetus to the car stealing industry.

A special meeting of the Grain, Hay and Feed Receivers' Association of Cincinnati, Ohio, was held September 28, to consider complaints made by James A. Londen against two prominent country shippers. The complaint was that the shippers had overdrawn their accounts, and had otherwise proved themselves to be undesirable parties with whom to have dealings. The Secretary of the Association was instructed to write the two firms to the effect that unless they explained the matter or offered a proper defense they would be listed on the books of the Association as unreliable, and not safe to deal with.

Trade Notes

The S. Howes Co., Silver Creek, N. Y., writes us: "September was the largest month for orders this company has had in ten years."

The Union Iron Works, Decatur, Ill., is introducing its portable corn sheller in new territory, and is meeting with flattering success.

The Sykes Steel Roofing Co., 611 S. Morgan Street, is very busy, and has been for several months. One line of activity has been the elevator trade, the company sharing in the general activity that has been so noticeable in building and overhauling elevators. In 30 days the company shipped over \$10,000 worth of material for elevators east and west.

The Link-Belt Machinery Co. of Chicago, Ill., reports that its shops have been busy on a number of large elevator contracts during the past few months. The contracts included all the shafting, pulleys, grain trippers, belting, gearing, rope drives, etc., for the Iowa Elevator at Peoria, Ill., Santa Fe Elevator at Winfield, Kans., and elevator of the Texas Star Flour Mill at Galveston, Texas.

The Invincible Grain Cleaner Co., Silver Creek, N. Y., writes us: "Our trade is growing into large proportions. Orders are pouring in on us from every direction, and we are constantly adding men to our force. September was the best month we have ever had, as we received a large increase of orders over any previous month; and every sign points to a still greater trade for this month."

The H. Channon Co. has lately furnished complete outfits of its Ajax Transmission Rope for the new grain elevator now being erected by the Manchester Ship Canal & Warehouse Co.'s elevator at Manchester, England; the new Louisville & Nashville Elevator at Pensacola, Fla.; the Texas Star Flour Mill Co.'s new plant at Galveston, Texas; a new elevator at Peoria, Ill., and one at Winfield, Kans., besides several others. The new drive for the Louisville & Nashville R. R. Co.'s elevator is probably the largest that has ever been installed in the country.

The employees of the S. Howes Co. at Silver Creek, N. Y., had their second annual outing on September 18. A right royal feast was spread by a local caterer for the employees and invited guests. The afternoon was spent in baseball, quoits, target shooting and general good fellowship, after which came the feast. Mr. L. E. Barbeau, president of the company, being absent in England, the doing of the honors devolved upon the other officers of the company. In the evening Messrs. Alexis and Walton Barbeau gave a dance to the employees at Beach Park, which was also largely attended. The second annual outing was voted an entire success.

E. Lee Heidenreich, the well-known designer and architect of grain elevators, has perfected a new system of constructing fireproof grain elevators, which he claims is the least expensive on the market. The walls are made of cement moulded about iron rods, similar to the European style of construction, it is, however, a great improvement over the European method. A number of experiments have been made with it, and it is expected to use this style of construction in oil and water tanks, as well as grain elevators. As soon as the patents applied for are granted an illustrated description of the system will be published in this journal.

CHANGE OF INSPECTION AT TOLEDO.

The Daily Market Report of Toledo in its issue of October 7 contained a notice that henceforth wheat with 25 per cent of rye and 60 pounds weight will be graded wheat and rye.

With more than 25 per cent, and not over 50 per cent, of rye and 60 pounds weight, rye, N. E. G. wheat, on account of rye.

With more than 50 per cent. rye and 56 pounds weight, rye and wheat.

RANGE OF PRICES AT CHICAGO.

The daily range of prices for cash grain at Chicago since September 15 has been as follows:

September.	NO. 2 R.W. WHT.		NO. 2 SPG. WHT.		NO. 2 CORN.		NO. 2 OATS.		NO. 2 RYE.		NO. 3+ BARLEY.		NO. 1 FLAXSEED	
	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.	Low.	High.
15....	94 1/4	94 1/4	93	95	29 1/2	30 1/2	19 1/2	19 1/2	50	50 1/2	32	43	106 1/2	106 1/2
16....														
17....														
18....														
19....														
20....														
21....														
22....														
23....	94 1/2	94 1/2	91	91 1/2	29	29 1/2	19 1/2	19 1/2	47 1/2	47 1/2	31	48	103 1/2	104 1/2
24....														
25....														
26....														
27....														
28....														
29....														
30....														
31....														
Oct. 1....														
2....														
3....														
4....														
5....														
6....														
7....														
8....														
9....														
10....														
11....														
12....	94	94	85	85	26 1/2	27 1/2	18 1/2	18 1/2	45	45 1/2	28	43	97 1/2	98 1/2
13....														
14....														
15....														

*Holiday. +Free on board or switched.

During the week ending September 18. Prime Contract Timothy sold at \$2.65@2.70 per cental. Prime Contract Clover Seed at \$5.75@6.15. Hungarian at \$0.50@0.60. German Millet at \$0.50@0.70. buckwheat at \$0.60@0.70 per 100 pounds.

During the week ending September 25. Prime Contract Timothy sold at \$2.62 1/2@2.70 per cental. Prime Contract Clover Seed at \$5.75@5.85. Hungarian at \$0.50@0.65. German Millet at \$0.50@0.70. buckwheat at \$0.60@0.70 per 100 pounds.

During the week ending October 2. Prime Contract Timothy sold at \$2.65@2.75 per cental. Prime Contract Clover Seed at \$5.30@5.75. Hungarian at \$0.50@0.65. German Millet at \$0.50@0.80. buckwheat at \$0.70@0.95 per 100 pounds.

During the week ending October 8. Prime Contract Timothy sold at \$2.60@2.62 1/2 per cental. Prime Contract Clover Seed at \$5.25@5.30. Hungarian at \$0.50@0.65. German Millet at \$0.60@0.80. buckwheat at \$0.70@0.85 per 100 pounds.

RECEIPTS AND SHIPMENTS AT TOLEDO.

The receipts and shipments of grain and hay at Toledo, Ohio, during the month of September, 1897, as compared with the same period of the preceding year, were, according to Denison B. Smith, secretary of the Produce Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,665,882	1,066,595	1,821,290	780,937
Corn, bushels.....	783,040	113,500	810,400	94,900
Oats, bushels.....	190,816	103,158	328,200	4,000
Barley, bushels.....				
Rye, bushels.....	219,716	65,260	295,800	25,560
Clover Seed, bags.....				
Flour, barrels.....	9,447	5,618	191,037	317,549

FLAXSEED AT CHICAGO.

The receipts and shipments of flaxseed at Chicago during the 14 months ending with September, as reported by S. H. Stevens, flaxseed inspector of the Board of Trade, were as follows:

Months.	Receipts.		Shipments.	
	1897-98.	1896-97.	1897-98.	1896-97.
August.....	813,160	1,770,160	299,108	1,060,659
September.....	696,000	1,627,480	557,895	1,399,514
October.....		2,014,920		315,159
November.....		874,640		259,916
December.....		643,272		238,865
January.....		362,500		230,267
February.....		344,520		137,185
March.....		307,980		207,725
April.....		176,900		524,273
May.....		164,720		782,270
June.....		290,000		141,478
July.....		251,720		134,445
Total bushels.....	1,509,160	8,828,812	857,003	5,632,013

There was in store in Chicago, in regular elevators, at the close of business October 9, 926,778 bushels of flaxseed, as follows: No. 1 Northwestern, 112,653 bushels; No. 1, 698,618 bushels; Rejected, 108,751 bushels; No Grade, 6,756 bushels. This is an increase for the week of 37,693 bushels over the preceding week and an increase of 140,624 bushels over the amount in store Oct. 10, 1896.

RECEIPTS AND SHIPMENTS AT PEORIA.

The receipts and shipments of grain and hay at Peoria, Ill., during the month of September, as compared with the same period of the preceding year, were, according to R. C. Grier, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	40,400	260,400	13,800	143,000
Corn, bushels.....	1,421,700	1,365,850	678,800	645,800
Oats, bushels.....	981,300	1,767,400	992,600	1,537,400
Barley, bushels.....	81,900	36,300	57,000	20,300
Rye, bushels.....	3,000	7,800	2,400	3,000
Mill Feed, tons.....	495	570	5,420	3,431
Seeds, pounds.....	420,000	366,000	780,000	345,700
Broom Corn, pounds.....	30,000	180,000	30,000	174,600
Hay, tons.....	2,130	830	260	350
Flour, barrels.....	22,650	40,650	23,250	67,650
Spirits and Liquors, hbls.....				
Syrup and Glucose, hbls.....				

RECEIPTS AND SHIPMENTS AT DULUTH.

The receipts and shipments of grain and hay at Duluth, Minn., during the month of September, as compared with the same period of the preceding year, were, according to Frank E. Wyman, secretary of the Board of Trade, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	11,061,893	9,933,380	8,037,275	8,078,020
Corn, bushels.....	337,170	34,831	178,649	33,331
Oats, bushels.....	73,303	432,356	69,636	554,517
Barley, bushels.....	611,467	673,544	404,457	542,473
Rye, bushels.....	214,917	232,199	10,641	126,801
Grass seed, pounds.....				
Flaxseed, bushels.....	220,750	733,683	746,550	748,610
Flour, barrels.....	560,955	541,005	879,220	966,190
Flour production Duluth and Superior.....	254,025	312,410		

RECEIPTS AND SHIPMENTS AT KANSAS CITY.

The receipts and shipments of grain and hay at Kansas City, Mo., during the month of September, as compared with the same period of the preceding year, were, according to E. D. Bigelow, secretary of the Commercial Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, cars.....	5,145,000	1,366,200	4,572,600	
Corn, cars.....	851,900	691,600	606,900	
Oats, cars.....	412,000	669,000	201,000	
Barley, cars.....	4,000	2,400	2,400	
Rye, cars.....	120,600	6,000	43,800	
Flaxseed, cars.....	49,000	74,000	11,500	
Hay, cars.....	7,190	9,180	1,520	
Flour, cars.....				
Bran, cars.....				

No record of shipments previous to 1897.

RECEIPTS AND SHIPMENTS AT CLEVELAND.

The receipts and shipments of grain, hay, etc., at Cleveland, Ohio, during the month of September 1897, as compared with the same period of the preceding year, were, according to F. A. Scott, assistant secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	315,258	273,323	89,074	156,075
Corn, bushels.....	462,682	42,909	405,365	None.
Oats, bushels.....	614,441	190,634	307,541	16,500
Barley, bushels.....	8,649	5,565	None.	None.
Rye and other cereals.....	28,100	19,527	23,374	17,227
Hay, tons.....	4,135	*	473	
Flour, barrels.....	64,460	69,380	36,280	39,520

* Can not ascertain.

RECEIPTS AND SHIPMENTS AT ST. LOUIS.

The receipts and shipments of grain and hay at St. Louis, Mo., during the month of September, as compared with the same period of the preceding year, were, according to George H. Morgan, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts.		Shipments.	
	1896.	1897.	1896.	1897.
Wheat, bushels.....	1,612,000	1,781,900	797,975	1,001,515
Corn, bushels.....	1,330,800	3,192,700	2,247,979	2,352,100
Oats, bushels.....	1,237,500	1,299,100	328,822	213,690
Barley, bushels.....	22,100	150,750	1,150	1,400
Rye, bushels.....	13,300	156,800	5,360	26,170
Hay, tons.....	13,120	13,165	4,786	4,461
Flour, barrels.....	137,215	149,805	244,417	161,848

RECEIPTS AND SHIPMENTS AT CHICAGO.

The following table, compiled by George F. Stone, secretary of the Board of Trade, shows the receipts and shipments at Chicago during September, 1897 and 1896, of seeds, hay and broom corn:

Receipts.	Timothy lbs.	Clover, lbs.	Other Grass Seeds, lbs.	Flax-seed, bu.	Broom Corn, lbs.	Hay, tons.
1897.....	12,967,742	1,814,903	670,780	709,639	1,470,686	23,972
1896.....	17,457,492	1,208,497	249,397	1,910,129	1,006,390	18,368
Shipments						
1897.....	8,973,343	657,596	1,712,514	464,159	1,181,849	1,157
1896.....	15,280,615	441,572	1,184,635	1,469,647	1,629,172	3,251

RECEIPTS AND SHIPMENTS AT BUFFALO.

The receipts and shipments of grain and hay at Buffalo, N. Y., during the month of September, as compared with the same period of the preceding year, were, according to Wm. Thurstone, secretary of the Merchants' Exchange, as follows:

Articles.	Receipts by Lake.		Shipments by Canal.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	8,157,066	2,018,605	626,543	1,880,369
Corn, bushels.....	14,406,423	4,956,703	2,297,691	159,578
Oats, bushels.....	6,666,932	4,053,304	180,417	1,579,413
Barley, bushels.....	1,333,400	1,005,512	447,087	556,258
Rye, bushels.....	487,800	890,235	259,619	739,957
Grass seed, lbs.....	38,472	*4,348		
Flaxseed, bushels.....	723,000	12,441,164	12,102,840	111,699,426
Hay, tons.....				
Flour, barrels.....	1,679,980	1,365,525		12,450

* Bags. +Bushels.

RECEIPTS AND SHIPMENTS AT MILWAUKEE.

The receipts and shipments of grain and hay at Milwaukee, Wis., during the month of September, as compared with the same period of the preceding year, were, according to Wm. J. Langson, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	1,084,680	591,150	77,100	204,270
Corn, bushels.....	910,650	97,900	584,050	17,150
Oats, bushels.....	817,000	1,735,900	598,634	1,641,550
Barley, bushels.....	1,262,200	936,800	871,518	290,323
Rye, bushels.....	172,425	234,200	42,240	329,597
Grass seed, pounds.....	560,520	527,185	108,000	482,420
Flaxseed, bushels.....	29,403	90,505	2,900	44,160
Hay, tons.....	1,613	1,598		130
Flour, barrels.....	179,150	177,110	303,531	311,698

RECEIPTS AND SHIPMENTS AT MINNEAPOLIS.

The receipts and shipments of grain and hay at Minneapolis, Minn., during the month of September, as compared with the same period of the preceding year, were, according to G. D. Rogers, secretary of the Chamber of Commerce, as follows:

Articles.	Receipts.		Shipments.	
	1897.	1896.	1897.	1896.
Wheat, bushels.....	6,750,760	9,239,850	897,860	1,184,950
Corn, bushels.....	425,120	42,780	18,080	3,570
Oats, bushels.....	2,397,740	695,800	17,740	472,700
Barley, bushels.....	359,620	227,060	208,780	68,820
Rye, bushels.....	123,220	82,160	48,600	95,570
Grass Seed, pounds.....				
Flaxseed, bushels.....	330,510	130,310	68,160	72,3

INSPECTED RECEIPTS AT CHICAGO.

According to the report of Chief Grain Inspector E. J. Noble, the grain received at Chicago during September, 1897, was graded as follows:

WINTER WHEAT.

Railroad.	White.			Hard.			Red.			No G'de.
	2	3	4	2	3	4	2	3	4	
C. B. & Q.			1	19	314	345	2	5	9	2
C. R. I. & P.					3	29			1	
Chicago & Alton				1	59	1142			1	1
Illinois Central							9	8	4	1
Freeport Div., I. C.			1							
Galena Div., C. & N. W.				2	135	48	1			
Wis. Div., C. & N. W.										
Wabash				4	19	81	8	18	7	7
C. & E. I.										
C. M. & St. P.			2	26	18	453		3		
Wisconsin Central			1							
Chicago & Great West			1	1	5	81	1	2		
A. T. & S. Fe.				3	207	1598		8	2	
E. J. & E.										
Through and special			1	1	81	140	18	50	2	3
Total each grade	4	3	57	84	3924	9	39	112	46	14
Total winter wheat										5056

SPRING WHEAT.

Railroad.	Colo- rado.		Northern.			No Grade.			White.			Mixed Wheat.	
	2	3	2	3	4	2	3	4	2	3	4	2	3
C. B. & Q.						175	1269	61	4	2	5	38	2
C. R. I. & P.						8	224	23	5	1			1
Chicago & Alton													
Illinois Central						1	5						
Freeport Div., I. C.						6	46	5					
Galena Div., C. & N. W.			2	145	634	16	8						
Wis. Div., C. & N. W.													
Wabash						8	8	6					
C. & E. I.													
C. M. & St. P.						8	478	62					
Wisconsin Central													
Chicago & Great West													
A. T. & S. Fe.													
E. J. & E.													
Through and special			3	277	96	9							
Total each grade	2		5	629	2816	256			12	5	30	4	23
Total spring wheat													3,797

CORN.

Railroad.	Yellow.		White.		No Grade.		
	2	3	2	3	2	3	4
C. B. & Q.	1,765	305	363	151	4,041	1353	238
C. R. I. & P.	613	126	57	14	2,618	529	310
Chicago & Alton	750	43	16	14	943	43	53
Illinois Central	1,057	36	233	14	1,034	3	29
Freeport Div., I. C.	45	39	3	2	148	165	61
Galena Div., C. & N. W.	358	239	37	23	360	392	325
Wis. Div., C. & N. W.	12	3					
Wabash	467	111	28	31	709	111	89
C. & E. I.	203	15	10	12	284	7	2
C. M. & St. P.	156	132	8	6	367	358	275
Wisconsin Central							
Chicago & Great West	31	68	2	3	80	396	34
A. T. & S. Fe.	288	22	111	7	823	47	9
E. J. & E.	199	120	30	12	1,077	506	308
Through and special	17				2	7	3
Total each grade	5,963	1,260	1,395	302	12,487	3,553	1,724
Total corn							27,116

OATS AND RYE.

Railroad.	OATS.					RYE.				
	White.			No Grade.		No Grade.			No Grade.	
C. B. & Q.	133	15	1172	4	192	77		9	7	202
C. R. I. & P.	186	1	876	9	27	30	4	19	45	15
Chicago & Alton	11	4	224	4	135	41	25	14	1	4
Illinois Central	31	8	123	19	367	23	1	5	6	1
Freeport Div., I. C.	16	43	231	7	12	19		2	21	11
Gal. Div., C. & N. W.	212	43	851	4	108	25		7	104	18
Wis. Div., C. & N. W.	6	6	87	1				2	12	1
Wabash	83	12	267	27	86	116		5	1	6
C. & E. I.	17		591	8	241	157		3	21	4
C. M. & St. P.	156	22	929	2	81	7		10	11	130
Wis. Central	1	1	12							1
Chi. & Great West	55	5	207	1	16	35		1	10	9
A. T. & S. Fe.	53	2	170	2	69	28		2	1	8
E. J. & E.	86	8	231	2	13	7		3	1	1
Thro and special	9	5	109	6	154	29		3	22	6
Total ea. grade	1060	180	7080	96	1531	809	50	53	54	591
Total oats								10859		130
Total rye										794

* White Clipped.

BARLEY.

Railroad.	BayBrewing.		Chevalier.		No Grade.			Total No. Cars all Gr'n by Roads
	3	3	2	3	4	5		
C. B. & Q.					36	162	7	12,490
C. R. I. & P.					33	389	24	6,248
Chicago & Alton								3,683
Illinois Central								4,271
Freeport Div., I. C.					1	169	219	1,287
Galena Div., C. & N. W.					14	486	221	4,855
Wis. Div., C. & N. W.					4	133	68	379
Wabash							1	2,602
C. & E. I.							1	1,669
C. M. & St. P.					3	439	331	4,612
Wisconsin Central								16
Chicago & Great West					43	45	4	1,164
A. T. & S. Fe.					4	18		3,518
E. J. & E.					2	24	4	2,694
Through and special								1,104
Total each grade	1	34	1,340	1,424	187	5		50,622
Total barley								3,000
Total grain, cars								50,622

VISIBLE SUPPLY OF GRAIN.

The following table shows the visible supply of grain Saturday, Oct. 9, 1897, as compiled by George F. Stone, secretary of the Chicago Board of Trade:

In Store at	Wheat, bu.	Corn, Bu.	Oats, bu.	Rye, bu.	Barley, bu.
Albany		100,000	75,000		
Baltimore	1,007,000	758,000	379,000	98,000	
Boston	450,000	901,000	16,000		
Buffalo	1,002,000	836,000	763,000	64,000	568,000
do. afloat					
Chicago	3,361,000	18,958,000	3,182,000	845,000	353,000
do. afloat					
Cincinnati	8,000	4,000	15,000	6,000	22,000
Detroit	341,000	10,000	19,000	40,000	13,000
Duluth	2,574,000	423,000	167,000	668,000	707,000
do. afloat					
Indianapolis	145,000	116,000	19,000	1,000	
Kansas City	1,520,000	243,000	77,000	32,000	
Milwaukee	107,000	391,000	48,000	51,000	193,000
do. afloat					
Minneapolis	2,779,000	377,000	1,897,000	71,000	8,000
Montreal	369,000	25,000	260,000	55,000	27,000
New York	2,377,000	8,792,000	3,478,000	309,000	54,000
do. afloat	8,000		24,000	21,000	90,000
Oswego	20,000	120,000			60,000
Peoria	2,000	72,000	56,000		
Philadelphia	904,000	1,353,000	106,000		
St. Louis	1,579,000	983,000	596,000	268,000	1,000
do. afloat	130,000				
Toledo	431,000	508,000	419,000	62,000	
do. afloat					
Toronto	38,000		3,000		13,000
On Canals	349,000	989,000	166,000	168,000	140,000
On Lakes	3,293,000	1,744,000	1,637,000	185,000	521,000
On Miss. River		1,000	1,000		
Total	22,794,000	37,704,000	13,383,000	2,944,000	2,772,000
Corresponding date 1896	52,434,000	14,464,000	9,533,000	2,031,000	2,920,000

The Burlington Elevator "E" at Chicago, Ill., ceased to be a public house September 20, and its stock of \$51,906 bushels of corn was taken out of the visible and regular stock on that date.

The National Grain Elevator at Chicago, Ill., has been made regular. It has a capacity of 2,000,000 bushels of grain.

GRAIN IN STORE AT OTHER POINTS.

In addition to the above, there was in store at the points named below, on the 10th day of the month, the following grain:

	Wheat, bu.	Corn, bu.	Oats, bu.	Rye, bu.	Barley, bu.
August 10, 1897	1,600,334	1,446,228	907,262		26,830
August 10, 1896	1,477,800	1,698,217	316,539		1,898

Flax in 1897, 101,675 bushels.

The grain included in the foregoing table was stored at the following points on August 10 (in bushels):

Erie, Pa., 118,200 bushels of wheat, against 306,003 in 1896; 482,300 bushels of oats, against 272,065 in 1896; 25,800 bushels of barley, against none in 1896; 50,000 bushels of flax, against 51,675 in 1896. Reported by Douglas Benson, secretary of the Board of Trade.

Newport News, Va., 267,280 bushels of wheat, against 22,455 in 1896; 80,110 bushels of corn, against 598,855 in 1896; 320,530 bushels of oats, against 224,535 in 1896. Reported by W. S. Upshur, agent Chesapeake & Ohio Grain Elevator Co.

Cleveland, Ohio, 42,000 bushels of wheat; 22,000 bushels of corn; 490,000 bushels of oats. Reported by F. A. Scott, assistant secretary of the Cleveland Chamber of Commerce.

Ogdensburg, N. Y., 41,500 bushels of wheat, against 57,500 in 1896; 826,100 bushels of corn, against 826,500 in 1896; 83,300 bushels of oats, against 23,000 in 1896. Reported by W. G. Westbrook, agent Ogdensburg Terminal Co.

Richmond, Va., no wheat, against 40,207 bushels in 1896; 35,718 bushels corn, against 797 in 1896; 4,412 bushels oats, against 12,217 in 1896. Reported by T. E. Swain, agent in charge of Richmond Elevator.

Fort William, Ont., 1,131,354 bushels of wheat, against 1,044,605 in 1896; 10,990 bushels of oats, against 56,907 in 1896; 1,096 bushels of barley, against 1,893 in 1896. Reported by M. Sellers, agent Canadian Pacific Elevators.

WHEAT RECEIPTS AT PRIMARY MARKETS.

The wheat receipts at nine primary markets during the fourteen weeks ending October 4, for the last three years, according to the Cincinnati Price Current were as follows:

	1897-98.	1896-97.	1895-96.
St. Louis	5,871,000	7,329,000	5,595,000
Toledo	6,554,000	3,710,000	3,351,000
Detroit	2,179,000	1,287,000	1,071,000
Kansas City	5,225,000	3,588,000	2,780,000
Cincinnati	290,000	414,000	341,000
Winter	30,124,000	16,228,000	13,128,000
Chicago	11,246,000	9,778,000	4,632,000
Milwaukee	2,615,000	901,000	2,629,000
Minneapolis	14,592,000	18,832,000	16,642,000
Duluth	16,122,000	19,682,000	14,311,000
Spring	44,575,000	49,193,000	38,214,000
Total, bus. 14 weeks	74,699,000	65,521,000	51,352,000

SCREENINGS.

Cool Colonel Caleb Carter
Showed the boys that he was smarter
Than to lift a tempting quarter that was hot enough to burn;
But in grain he speculated
And was promptly educated
By the chaps who took his money in the game he paid to learn.

CROP REPORTS

[Readers will confer a favor by sending us reports each month of the acreage and condition of growing crops, the amount of grain and hay in farmers' hands and stocks in store, for publication in this department.]

MINNESOTA, Appleton, Swift Co., Oct. 9.—Wheat is pretty good in this section this season, yielding from 10 to 15 bushels per acre. A few farmers were in too much hurry, however, and cut it too green. This shriveled up the wheat berry considerably. That which is good is of fine quality and makes No. 1 flour. Farmers of this vicinity are all happy over the return of prosperity and 80-cent wheat. **CHARLES L. BUETOW.**

FLAXSEED.—The Commercial Record of Duluth says: If the Northwest had put as much acreage into flaxseed this year as was sown in 1896 and 1895, the country would have had seed enough to have carried them well into next year's crop. Instances have been reported to us where the output has been over 19 bushels to the acre, and yields of 12 to 15 bushels are quite common. It is, of course, impossible to make an accurate comparison of this year's acreage with last, as there have been no figures published showing last year's acreage. If, however, reports of men who traveled over the country are to be relied on, the acreage will not exceed 50 per cent. of last year's. This, however, with increased yields, will bring the total up to probably 60 per cent. of last year's, or about 6,000,000 bushels, of which 4,500,000 bushels will come to Duluth and Minneapolis, as compared with 9,000,000 bushels during the twelve months ending August 1 last.

MANITOBA WHEAT.—Hundreds of samples of wheat, from all parts of the country, were gathered together at Winnipeg last week for the use of the standards board in fixing the wheat grades for the crop of 1897. An examination of these would give a fair index to the crop. One feature of the crop is good color. The wheat is generally a bright sample, showing that there has been no damage from bleaching. It should therefore make a good, strong flour. The berry is not large and a good many thin samples were in evidence, while some were very thin and shrunken. The crop is very free from smut, and no trace of frost was observed. Another feature quickly noticeable is the great number of dirty samples—that is, wheat containing an unreasonable proportion of seeds and weeds. From the look of many of the samples, the farmers are paying for the thrashing of a vast quantity of weed seeds this year. Besides paying for the thrashing of weeds, they will have the labor of harvesting and marketing the weeds, thus adding to the labor and cost of harvesting the crop all the way through, from the cutting to the marketing, while there will be additional cause for dissatisfaction when the grain buyers dock the weight for dirt. Growing weeds is very unprofitable, not only on account of the labor and cost of growing a mixture of wheat and weeds, but also on account of the fact that the yield of wheat per acre will be very likely to decrease in proportion as the yield of weed seeds increases. The soil cannot produce a very heavy crop of grain when it has to supply nourishment and moisture to a large crop of weeds. Barring weeds, the crop has many good features and it will mostly go into the two grades of No. 1 and 2 Hard. —Winnipeg Commercial, September 27.

KENTUCKY.—The report for October 1 is made up from replies received from 144 correspondents, representing 99 counties. **CORN.**—Drouth that prevailed over the greater portion of the state during the month of August spread over the whole of the state during September. Water, both for man and beast, in many parts, is becoming distressingly scarce, and in some places stock are not only driven miles to water, but are fed as in winter months. Not a county reporting, from Pike to Fulton, and from Campbell to Cumberland, that does not tell of great damage to crops from dry weather. In some localities the early planted corn in rich bottom land, where well cultivated, will make a fair crop, but a large per cent. has matured too early, and will be light and chaffy and loose on the cob. Mason, the only county reporting an average crop, has a yield of 40 bushels per acre, while the county of Daviess, where the drouth is the most distressing ever known in the history of the county, the average yield is only 13 bushels per acre. Owing to the dry state of the atmosphere the September frosts did but little damage to corn, and that was of the late planting. Nine per cent. is the estimated damage by frost in the state, and 23 bushels per acre is the estimated yield. **CLOVER.**—The number of acres of clover cut for seed as compared with 1896 is 95 per cent., and the average yield per acre is 2 bushels. Several counties reported an average yield of 3 bushels per acre. **PASTURES.**—Pastures in some counties are a thing of the past. The average condition on August 1 was 97, and on September 1 88, while on October 1 it is only 47. Henderson County reports the lowest average, 8 per cent., and Clay the highest, 100 per cent. **FALL PLOWING.**

—Fall plowing is at a standstill. A large crop of wheat was anticipated, but it is found to be impossible to break the ground. Thirty-four per cent. of an average crop has already been sown in corn and on tobacco land, and if it rains sufficient to soften the ground by October 15, an average crop will be pitched. There seems to be a general anxiety over the state to plant a large crop of wheat, and in some places the seed is being sown in the dust. **LUCAS MOORE,** Commissioner of Agriculture.

MICHIGAN, Department of State, Lansing, Oct. 7, 1897.—**WHEAT.**—The number of acres of growing wheat in the state last May as shown by the supervisors' returns was 1,513,919; the average yield per acre as found by thrashing is 16.46 bushels, and the total yield in the state 24,925,007 bushels. The total yield is found by multiplying the number of acres in each county by the average per acre in the same county, and footing the products. The average per acre in the southern counties is 17.74 bushels; in the central, 13.35 bushels, and in the northern, 9.33 bushels. These averages are based upon a return of 117,250 acres thrashed in the southern counties, more than 30,000 in the central counties, and more than 4,000 in the northern counties. The total number of bushels of wheat reported marketed by farmers since the September report was published is 2,447,282, and in the two months, August-September, 3,635,032. This is 1,463,775 bushels more than reported marketed in the same months last year. **OATS** are estimated to yield 25.79 bushels per acre, **BARLEY** 21.18 bushels, and **CORN** 64 bushels of ears, per acre. This estimate for corn is about three bushels less than the average yield in 1896. The yield of oats is from thrashers' records. Considerable corn fodder has been injured by frost. **POTATOES** are estimated to yield in the state 61 per cent. of an average crop. **BEANS** are estimated to yield 86 per cent. of an average crop. It is probable that the ground was never so dry in Michigan at the usual time of wheat sowing as this year. The average rainfall in the state in August was 2.04 inches, and in September about 1.30 inches. While these figures show a deficiency each month as compared with the normal, they do not convey any idea of the severity of the drouth. The rainfall during the latter part of August and most of September was mostly in the northern counties and upper peninsula. Since about the middle of August the average rainfall in the southern and central counties, where 96 per cent. of the wheat crop is grown, has not been sufficient to be of appreciable benefit. The ground is thoroughly dried out. Wheat sowed early has come up, but unevenly. That sowed later was "dusted in," and much of it will hardly grow, at least not until rain comes. Many farmers had not yet sowed on the first of October. They were still waiting for rain. **WASHINGTON GARDNER,** Secretary of State.

GOVERNMENT CROP REPORT.—United States Department of Agriculture, Division of Statistics, Washington, D. C., 4:00 P. M., Oct. 11, 1897.—The October report of the Statistician of the Department of Agriculture shows the average condition of **CORN** on October 1 to have been 77.1, as compared with 79.3 on September 1, with 90.5 on Oct. 1, 1896, and 82.5, the average for the last 10 years. There has been an improvement during the month of 6 points in Maryland and 4 in Iowa. On the other hand there has been a decline of 3 points in Kansas, 6 in Nebraska, 3 in Ohio, 3 in Illinois, 4 in Missouri and a general decline in the Southern states. **OATS.**—The preliminary estimate of the yield per acre of oats is 28.1 bushels, an increase of 3.8 bushels per acre over the October estimate of last year. The principal increase is west of the Mississippi River, Missouri, Nebraska and Kansas showing an increase of 6, 12 and 15 bushels per acre over last year. The average for quality is 87.6. **RYE.**—The preliminary estimate of the yield per acre of rye is 16.1 bushels, or 2.8 bushels per acre greater than the October estimate of the crop of 1896. The principal rye-producing states all show increases, as follows: New York 4, Pennsylvania 3, Michigan 6, Wisconsin 1, Kansas 7 bushels per acre over last year. The average for quality is 92.7, as compared with 89.9 in October of last year. **BUCKWHEAT.**—The condition of buckwheat has declined since September 1 4.3 points, the condition on October 1 being 90.8. All the states of principal production show a decline of several points except Wisconsin, where it is only 1 point. **BARLEY.**—The condition of barley shows an improvement of 1.2 points during the month, standing on October 1 at 87.6 points. In New York, Wisconsin, Minnesota and South Dakota there has been a decline, but in Michigan, North Dakota and California the month has witnessed a marked improvement, the average in California being 9 points higher than on September 1. **WHEAT.**—The average yield of wheat per acre will not be published pending the result of a special investigation of acreage and production now approaching completion. **TOBACCO.**—The condition of tobacco shows a decline of 5.2 points during September. The tobacco reports vary greatly as between the different states. **POTATOES.**—The condition of Irish

potatoes has declined 5.1 points. In the New England states the decline ranges from 8 points in Massachusetts and Connecticut to 18 in New Hampshire and 21 in Maine. In New York and Pennsylvania it is 9 and 5 points respectively, and in Illinois, Iowa and Nebraska it is 6, 2 and 4 points respectively. **JOHN HYDE,** Statistician.

OHIO.—The official report of the Ohio Department of Agriculture on the acreage, product and condition of crops represents the condition of crops as carefully estimated from the returns of the regular township correspondents of the department, received for Oct. 1, 1897. For product of wheat, oats, barley and rye, the estimates are based on reports of actual thrashing, which is the best index possible upon which to figure yield per acre by counties and the total yield for the state. Condition or prospect of other items in report are by comparison with a fair average condition or prospect. **WHEAT.**—Estimated area, 2,161,295 acres; average product per acre, 17.67 bushels; total estimated product for 1897, 38,194,083 bushels; quality compared with an average, 98 per cent.; crop of 1896 still in producers' hands, 10 per cent. **OATS.**—Estimated area, 878,270 acres; estimated product per acre, 31.17 bushels; total estimated product for 1897, 27,373,399 bushels; quality compared with an average, 85 per cent. **BARLEY.**—Estimated area, 13,925 acres; estimated product per acre, 27.58 bushels; total estimated product for 1897, 384,028 bushels; quality compared with an average, 93 per cent. **RYE.**—Estimated area, 35,675 acres; estimated product per acre, 18 bushels; total estimated product for 1897, 642,034 bushels. **CORN.**—Prospect compared with an average, 79 per cent. **POTATOES.**—Probable total compared with an average, 41 per cent. **TIMOTHY HAY.**—Average yield per acre, 1.50 tons; quality compared with an average, 84 per cent. The result of thrashing indicates that wheat condition as reported from month to month by percentage comparison was not estimated too high. The crop has been a good yield throughout the state and as a total is about double the crop of last year and about 12,000,000 bushels in excess of the crop of 1895, in both of which years there was a shortage. The wheat crop of 1894 was considerably in excess of a full average one for the state, in fact, was the largest ever produced in the state. The crop of 1897 is below that immense crop something more than 12,000,000 bushels. The following figures, relative to wheat production for the years referred to, are of interest for comparison at this time: 1894, 2,516,566 acres, 50,852,433 bushels, average per acre 20 bushels; 1895, 2,225,534 acres, 26,520,930 bushels, average per acre 11.9 bushels; 1896, 2,011,708 acres, 17,209,545 bushels, average per acre 8.53 bushels; 1897, 2,161,295 acres, 38,194,083 bushels, average per acre 17.67 bushels. About the entire area seeded last fall stood for the harvest, there being no occasion for any notable plowing up in the spring. Correspondents in some sections of the state report that, owing to excessive rains during harvest, quite a quantity of wheat sprouted in the shock, thus affecting the quality to a certain extent. The month of September has been for the most part extremely hot and dry. About the 20th frosts occurred and these conditions have had a bad effect upon the corn, which was prematured, and will result in a great quantity which will be unmerchantable. Fodder was badly dried and its value reduced from 25 per cent. to 50 per cent. Potatoes will not be a full crop; many sections reporting almost total failure; the product ranging from as low as 12 per cent. to as high as 90 per cent. in the different sections of the state. Pastures have dried up and in many localities water is becoming scarce. The dry month of September will have a very perceptible effect on the wheat area for 1898. Farmers have been unable to seed, or have delayed, waiting for rain, and the result will be that a large area intended for wheat will not be sown. A great deal of the wheat seeded has not germinated, and if rain does not bring it out there will be another loss of area from this cause. Altogether, the wheat prospect for next year is far from flattering or even promising. A very short area is certain.

Twice this year has the Chicago Board voted to do away No. 2 Spring Wheat as a contract wheat. The advocates of the change recently showed that during the past crop year something like 6,000,000 bushels of No. 2 Spring was harvested in the Chicago elevators, and only 361 cars received from the country. The surprising discovery is now made that even that, or part of it, was No. 1 Northern.—Duluth Commercial Record.

A. L. Porter of Clayton, Payue Co., Okla. T., in the Farm, Field and Fireside: In regard to Kaffir corn the half has not been told. I have looked for some experiment station to give it a thorough test, but so far have not seen anything. They always mix Soja beans or corn with it. Kaffir corn is good for everything in the stock line, either as fodder or grain; for feeding it can't be beat. It does not break up in handling as corn fodder does. As a grain it is about the same as barley.

Fires - Casualties

The grain elevator at North Manchester, Mich., has been burned.

The plant of the O. Dickinson Seed Co. at Salem, Ore., was damaged by fire recently.

J. P. Wooten, dealer in grain, etc., at Abilene, Texas, recently suffered a loss by fire.

The Hathaway, Heath Grain & Implement Co.'s plant at Mexico, Mo., was damaged by fire recently.

The Omaha Elevator Company's grain elevator at Platte Center, Nebr., was burned on the night of September 27.

The grain elevator at Lenox, Iowa, owned by K. Dockstader, was burned on the morning of October 9. Loss \$8,000.

D. Gregg & Son's grain elevator at Oakwood, Ill., was burned September 30. The fire caught from an adjoining building.

Jockeck & Moeller's grain elevator at Stockton, Iowa, caught fire recently, but the flames were extinguished before serious damage was done.

E. D. Childs' grain elevator, creamery and cheese factory at Crookston, Minn., was burned at 12 o'clock noon, September 11. Loss \$5,500, with no insurance.

A large amount of grain stored at La Crosse, Wis., owned by D. J. Cameron of La Crescent, Minn., was burned September 23. Loss \$6,000, with a partial insurance.

Wesley Nading, a grain merchant of Flat Rock, Ind., shot his wife on the morning of September 24, and then took his own life. He was 37 years of age, and his wife was 33.

Close & Son's elevator at Byron, Mich., was damaged by fire October 4. A bin of wheat and one of beans were destroyed. The fire was extinguished without doing farther damage.

The Dominion Grain Company's elevator at Bogot, Man., with 20,000 bushels of wheat, was burned October 4. The fire caught from prairie fire, which swept over a wide area of country.

The Central Elevator Co.'s warehouse at Waverly, S. Dak., containing about 1,000 bushels of wheat and flax, was burned on October 4. The fire is supposed to have been the work of tramps.

The warehouse and scale house connected with Short's elevator at Hillsboro, Ind., was burned September 20. The fire caught from a spark from a passing engine. Loss \$1,500, with no insurance.

Galloway & Meek's grain warehouse at Allenwood, Pa., caught fire from the sparks of a passing engine on October 4, and was burned. A considerable amount of grain was in store. Loss was covered by insurance.

About 15,000 bushels of grain were burned in the granary of H. J. Box at Campbell, Minn., on September 27. The fire was supposed to have been caused by the carelessness of some of the men smoking about the granary.

Benjamin Thoroman, a workman on the Hyde Elevator at Pipestone, Minn., fell recently from the cupola to the railroad track, a distance of 40 feet. Several bones were broken, and it was thought he was injured internally.

The grain elevator owned by W. H. Powers at Genoa, Ohio, was burned a short time after midnight, September 28. The fire started in the engine room. A large amount of grain was consumed. Loss \$9,000; insurance \$6,500.

The grain elevator at Winchester, Kans., owned by R. B. Wallace, was burned on the night of September 27. About 3,500 bushels of corn were destroyed. The fire is supposed to have been of incendiary origin. Loss \$6,000.

The grain elevator at Emerson, Man., owned by D. H. McMillan of Winnipeg, was burned at 10 p. m., September 16. The fire started in the engine room. About 8,000 bushels of wheat were burned. The elevator had a capacity of 30,000 bushels. Loss \$15,000; insured.

The large elevator at Broadlands, Ill., owned by H. H. Carr & Co. of Chicago, was burned October 10. About 8,000 bushels of wheat were consumed. It was thought the fire was caused by a spark from a passing engine. The elevator will be rebuilt. Loss \$10,000, fully insured.

Two storage warehouses owned by Paul L. Norton, wholesale dealer in grain, flour, feed and hay at Elizabeth, N. J., were burned at 11 a. m., October 4. The large grain elevator and mill was saved. The fire also consumed the office, stables and some smaller buildings. The warehouses were each 100x50 feet and two stories in height. Loss esti-

mated between \$15,000 and \$20,000; covered by insurance.

J. W. Tate's grain warehouse at Centralia, Ill., was burned on September 25, entailing considerable loss. The fire is supposed to have originated from sparks from a railway engine.

The large grain elevator of P. F. Murray at Bloomfield, Nebr., was burned on the night of September 29. The fire originated in the boiler room. Some adjoining cribs containing 10,000 bushels of corn were also burned. Loss \$8,000; insurance \$4,000.

The brick elevator at Toledo, Ohio, owned by the A. L. Backus & Sons' Co., was burned at 11 p. m., September 21. The building contained no grain, as it was leased by the Lake Erie Transportation Co., who occupied it as a freight depot. The elevator was valued at \$25,000. It was insured for \$10,000.

John Roach's grain elevator at Severance, Kans., was burned at 2 a. m., September 10. The fire was supposed to have been caused by a spark from a passing engine. About 4,000 bushels of wheat, 5,000 bushels of corn, two carloads of coal, and a quantity of oats were destroyed. Loss \$7,000, with small insurance.

The H. J. O'Neill Company's grain elevator at Minneapolis City, Minn., was burned at 3 p. m., October 10. The fire is supposed to have originated from a spark from a passing engine. Considerable grain was formerly handled in the elevator, but it had been little used during the past few years. Loss \$1,000; insurance \$500.

The two grain elevators at Cherry City, Ill., owned by B. E. Brown and B. S. Sanborn, were burned September 20. The fire started in the elevator owned by Mr. Brown. Both elevators were well filled with rye, corn and oats. The loss amounted to \$10,000 on each elevator. Mr. Brown carried \$4,500 and Mr. Sanborn \$4,000 insurance.

The grain elevator at Amanda, Ohio, owned by Mrs. Anna Sunderman of Lancaster, and occupied by the Smith Milling Co. of Circleville, was burned at 5 p. m., October 4. It was thought the fire originated from spontaneous combustion in the dust room. The milling company had shipped out nearly all the contents of the elevator a short time previous to the fire. Loss on elevator \$3,500, with no insurance. Loss of Smith Milling Co. \$300.

The Merrill Milling Co.'s grain elevator at Kalamazoo, Mich., was badly damaged by fire and water at 5 a. m., September 18. The fire started in the cupola. The origin of the fire was unknown, as a workman had been at the place when it started at 2 a. m., and everything was all right. The damage to the building from fire was estimated at between \$2,000 and \$3,000. In addition to fire, about 8,000 bushels of grain were rendered almost worthless by water. Loss \$5,000; insurance \$3,000. The damage to the elevator has been repaired.

The Pacific Coast Elevator Co.'s grain warehouse at Guy, Wash., collapsed on the afternoon of October 7 under the weight of 60,000 bushels of wheat. The building was 150x50 feet and cost \$2,000. The elevator was not injured. Three men were in the warehouse at the time of the accident. One escaped through a car which was being loaded. Will Lawson was pinned down by several sacks of wheat and received serious though not fatal injuries. R. W. Backus had a nail driven through his hand and received other slight injuries. Loss on grain about \$500. Loss on building \$2,000.

A portion of the west wall of a grain warehouse at Seventy-seventh Street and the Illinois Central track, Chicago, Ill., fell outward at 9 p. m., September 11, and a large amount of grain ran out over the tracks. The grain was damaged to some extent. The building and grain were owned by Merrill & Lyon. The day before the accident the second floor of the building gave way a distance of two feet under the weight of 30,000 bushels of grain, but the timbers caught in some manner, and the plank flooring remained intact. As it was feared, however, that the building might collapse, workmen were ordered to remain outside. The building was formerly occupied by Woodruff & Crofoot as a cereal mill, but was purchased last year by its present owners, and was used as a storage warehouse.

A lack of rain has resulted in a great many disastrous prairie fires throughout the central and western states, in which much grain and hay have been destroyed. On September 30 a fire in the vicinity of New Castle, Ind., burned a large amount of grain and hay owned by Edward Fack. Near La Grange, Ind., on the same date, it was estimated there were 40,000 acres on fire, and the fields and homes of hundreds of farmers were threatened. A fire started in the New Haven marsh, near Chicago Junction, Ohio, and over 2,000 acres of land were rendered a smoking mass. In the vicinity of Benton Harbor, Mich., the same date, fire started in the Kieble clearings and spread over a large area of meadow and pasture land. A prairie fire swept over the northwestern part of Pawnee County, Kans., October 2, destroying 10,000 tons of hay

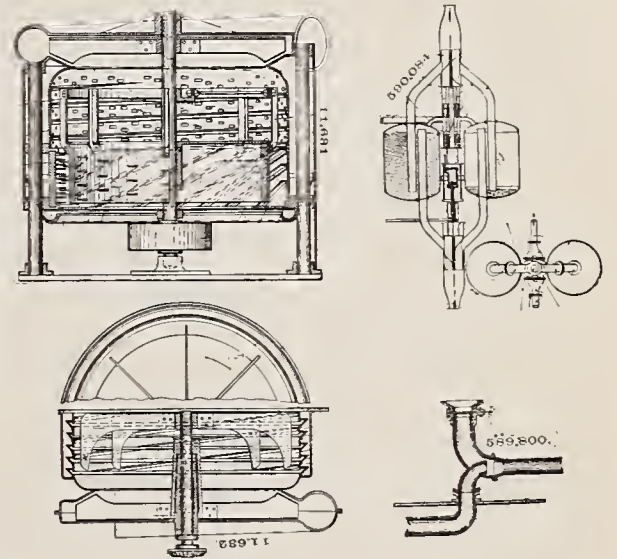
and corn fodder and several thousand bushels of wheat. The fire started from a thrashing machine. Over 10,000 acres were covered by this fire.

W. B. Cooley's grain elevator at Hartford City, Ind., was burned at 5:40 p. m., September 21. The fire started in the engine room from the gas engine. The engine was fitted with a gasometer, two tin cylinders, fitting one into the other, in which each charge of gas was measured before it entered the engine. In some manner gas escaped from the gasometer and caught from the hot tube used to ignite the gas in the engine. It was discovered shortly after it started, but could not be extinguished. About 8,000 bushels of wheat, 5,000 bushels of clover seed, and some corn and other grain were burned. Loss \$10,000; insurance \$5,000.

Late Patents

Issued on September 7, 1897.

Governor for Gas Engines.—Fred W. Spacke, Indianapolis, Ind. No. 589,583. Serial No. 586,570. Filed April 7, 1896.



Swivel for Pneumatic Grain Pipes.—Frederick J. Weber, Connersville, Ind., assignor to the Steel Storage and Elevator Construction Company, same place. No. 589,800. Serial No. 641,583. Filed June 21, 1897. See cut.

Grain Separator.—James W. Russell, Newton, Iowa. No. 589,621. Serial No. 624,137. Filed Feb. 19, 1897.

Issued on September 14, 1897.

Method of and Apparatus for Compressing Bales.—Stonewall R. Montgomery, Memphis, Tenn. No. 590,158. Serial No. 641,037. Filed June 16, 1897.

Explosive Gas Engine.—James S. Walch, Providence, R. I. No. 590,080. Serial No. 620,371. Filed Jan. 23, 1897.

Grain Elevator.—Emile Blanchard, Paris, France. No. 590,084. Serial No. 592,551. Filed May 22, 1896. Patented in France April 16, 1896. No. 255,612. See cut.

Issued on September 28, 1897.

Gas Engine.—Arnold J. Tackle, Oakland, Cal. No. 590,796. Serial No. 632,286. Filed April 15, 1897.

Issued on October 5, 1897.

Valve for Conveyor Chutes.—Charles Piez, Philadelphia, Pa., assignor to the Link Belt Engineering Company, same place. No. 591,292. Serial No. 611,420. Filed Nov. 7, 1896.

Grain Separator.—John M. McCue, Oak Cliff, Tex. No. 591,001. Serial No. 575,885. Filed Jan. 17, 1896.

Centrifugal Grain Separator.—Frank F. Landis, Waynesborough, Pa. No. 11,631. Serial No. 633,062. Filed April 20, 1897. (Reissue.) See cut.

Centrifugal Grain Separator.—Frank F. Landis, Waynesborough, Pa. No. 11,632. Serial No. 634,493. Filed April 29, 1897. (Reissue.) See cut.

DESIGNS AND TRADEMARKS.

Elevator Chain Bucket.—Levi L. Lamb, Chicago, Ill., assignor to the Whitman & Barnes Manufacturing Company, Akron, Ohio. No. 27,625. Serial No. 644,989. Filed July 17, 1897.

Seed Peas.—D. Landreth & Sons, Philadelphia and Bristol, Pa. No. 30,582. Application filed April 16, 1897. Used since 1883. Essential feature: A representation of a cluster of pea pods, together with the words "Landreth" and "Extra Early Peas."

It seems to us that estimates on the Argentine wheat crop are a little premature, as the harvest is several months off. Yet the London Times figures up the crop at 40,000,000 bushels, and the exportable surplus at 14,000,000 bushels.

ELEVATOR

GRAIN NEWS

Hobart, Iowa, has a new elevator.

Grassmere, Mich., has a new elevator.

An elevator is being built at West Ridge, Ill.

A new elevator has been built at Industry, Iowa.

O. S. Carr is erecting an elevator at Findlay, Ill.

Massena, Iowa, is to have a new elevator and grain firm.

The new elevator at Kirkpatrick, Ind., is now finished.

The new elevator at Hopejoy, Iowa, is ready for business.

P. O. McCully has built a grain elevator at Carrollton, Ohio.

The 40,000-bushel elevator at Bancroft, Iowa, is completed.

The new Wielepp Elevator at Cisco, Ill., is about completed.

P. D. Murphy is enlarging his elevator at Bear Creek, Wis.

C. Ottosen is again in the grain business at Humboldt, Iowa.

M. F. Hackett is now proprietor of the elevator at Fairfax, Mo.

Gus Wenzlemann is erecting a grain elevator at Manville, Ill.

N. Larson is building an elevator at Voorhies, Piatt Co., Ill.

It is expected that another elevator will be built at Colfax, Ind.

Wm. Truitt's new elevator at Findlay, Ill., is nearing completion.

An elevator is being erected at Sinclair, Ill., by Elmore & Hart.

A farmers' elevator company has been organized at Carlton, Nebr.

F. H. Wood is now handling grain in his new elevator at Hayes, Ill.

Porch & Adams are building a large grain elevator at Cabery, Ill.

H. C. Clark is enlarging and improving his elevator at Colfax, Ind.

H. H. Adams has sold his elevator at Scotland, Ill., to F. J. Maddock.

John Young is building an addition to his elevator at Michigantown, Ind.

The Bosch-Ryan elevator at Savanna, Ill., has been started up again.

Hanson Bros. have their new elevator at Hammond, Wis., completed.

The new elevator at Killarney, Man., is completed and in operation.

The grain firm of Hopps & Woodall, Baltimore, Md., has been dissolved.

W. H. Bush has bought out Davis & Co., grain dealers at Hindsboro, Ill.

John W. A. Hayes has again started in the grain business at Ipswich, Mass.

I. Stansberry has sold his grain business at Maynard, Iowa, to Geo. Ranney.

Chas. Topliff and A. E. Wood have sold their grain business at Gibson City, Ill.

The Northern Grain Co. of Chicago will build an elevator at Eau Claire, Wis.

John C. Liken & Co. will build a 20,000-bushel elevator in Sebawaing, Mich.

William Kloeppel of Ida, Mich., has sold his grain elevator to George Langdon.

Joseph Schluchter is building a large addition to his elevator at Pigeon, Mich.

Bickelhaupt & Marling have sold their elevator at Eureka, S. Dak., to Robb Bros.

Wm. A. Davis is opening a grain and agricultural implement store at Freeport, Me.

C. E. Buras of Owosso, Mich., expects to build an \$8,000 elevator there next spring.

The Cash Elevator at Hughes, Ill., is reported as completed and ready for business.

N. N. Turner succeeds Wm. Cool in the grain and coal business at Cumberland, Iowa.

John Carten, the Utica, Ill., grain dealer, has gone to the wall on account of the failure of a Chicago

commission man. It is reported that he will be able to pay his creditors.

Both roof and sides of the new elevator at Alhna, Mich., are being covered with slate.

I. O. Isham, Estherville, Iowa, has purchased an interest in the Albion grain business.

Alexander & Hexter are building a grain warehouse 30x60 feet at Belmont, Wash.

John Becker, Belen, N. M., has completed a new elevator in connection with his mill.

Paithel, Cue & Co. have contracted for the erection of an elevator at Ashmore, Ill.

Mauk & Hamner have put a new gasoline engine in their elevator at Montrose, Mich.

J. M. Culver has enlarged and improved his elevator at Culver, Tippecanoe Co., Ind.

H. P. Howe & Son are building an addition to their grain elevator at Derry Depot, N. H.

The O. P. Cheney elevator at Groveport, Ohio, has been purchased by Christ Herr.

The firm of Holmes & McKubben, seedsmen, of Harrisburg, Pa., has been dissolved.

The W. W. Cargill Co. is considering the building of a grain warehouse at Oconto, Wis.

Whallon & Co.'s new elevator at Warner, S. Dak., is now completed and doing business.

Will Hardin of Charleston, Ill., contemplates building an elevator near Fair Grange.

The Morris Grain Co. is erecting a new office at the foot of Franklin Street, Morris, Ill.

C. C. May has his new elevator at Cambridge, Wis., completed and ready for business.

W. S. McAuley has purchased a one-half interest in the South Elevator at Holstein, Nebr.

An addition has been built to the grain store of Matthews & Huston at Portland, Maine.

E. A. Baker & Co. have sold their grain business at Moose Jaw, Assiniboia, to T. D. Baker.

The Varneman & Sons Elevator and other property have been purchased by James Bronaugh.

F. G. Spanger & Co. have completed their large frame grain warehouse at Ritzville, Wash.

F. H. Crane & Sons will erect a grain elevator near their present building at Quincy, Mass.

C. A. Malmquist has put a gasoline engine and feed mill in his elevator at Winthrop, Minn.

D. L. Thompson of Rattlesnake, Ind., has traded his farm for a grain elevator at Dayton, Ind.

The Ashton Mill Co. of Ashton, S. D., will build a 30,000-bushel grain elevator during the fall.

A. H. Wieman, German Valley, Ill., is planning for the erection of a new grain elevator there.

The new elevator at Latimer, Iowa, is taking in grain. It is operated by a gasoline engine.

J. P. Smith of Schryler has located at Howells, Nebr., and will engage in the grain business.

The Omaha Elevator Co. has thoroughly overhauled and refitted its plant at Osceola, Nebr.

The new elevator built by Jacob G. Hieb & Co. at Marion, S. Dak., has been opened for business.

The James Quirk Milling Co. of Waterville, Minn., will build an elevator at New Richland.

C. C. Bender's new elevator at Spencer, Iowa, is completed, making four elevators in that town.

The Langdon Elevator Company will build a new 30,000-bushel grain elevator at Dresden, N. Dak.

An elevator of 18,000 bushels' capacity has been built at Towner, N. Dak., and another at Omamee.

It is reported that an elevator is to be built at Warrentown, Ill., by C. M. Paxton of Kansas, Ill.

Wm. Howlett & Co., grain dealers at Madison, S. Dak., have been succeeded by Vedder & Howlett.

Engold & Henderson have made extensive improvements on their elevator at Whittemore, Iowa.

Alva Gordy of Ogden, Ill., purchased H. Eversole's elevator at Fithian, and took possession October 1.

Hagey & Moore, the North Liberty, Ind., grain merchants, are erecting an elevator at Wyatt, Ind.

Clodius, Kalkwarf & Co. are building a 100-foot addition to their grain warehouse at Ritzville, Wash.

There is talk of a grain elevator being erected at Hickman, Ky., to be owned and controlled by farmers.

The Musson Elevator at Audubon, Iowa, is nearing completion. It will have a capacity of 80,000 bushels.

The grain elevator being built on the dock of the L. & N. R. R. at Pensacola, Fla., will be over 170 feet high. The work has been pushed forward

rapidly by employing day and night forces of men. The Moulton-Starrett Co. is doing the work.

Jacobs & Co. have completed and are now doing business in their new grain warehouse at Paskin, Wis.

S. H. Morrill of Oakland, Maine, intends to erect a large building and conduct a grain and lumber business.

L. R. Smith has acquired an interest in the old Bristow Elevator at Sullivan, Ill., and will buy grain there.

H. H. Swarthout of Pinckney, Mich., has bought the Bowman Elevator and moved it to his bean house.

The Farmers' elevator at Dennison, Minn., has been opened for business with E. G. Farrankop as agent.

A 30,000-bushel elevator is being built in connection with the flour mill at Greenville, Hunt Co., Texas.

A flax house 24x70 feet has been added to the north end of the Winona Elevator at Columbia, S. Dak.

Luse's elevator at Ross, Audubon Co., Iowa, is nearing completion. Its capacity is about 15,000 bushels.

B. L. Coon of Kokomo, Ind., is building an elevator at the town of Hemlock, on the Panhandle railroad.

Ernst & Thompson have rented the elevator at Oconomowoc, Wis., formerly operated by Wm. Thompson.

The Southern Railway Company is doubling the capacity of its present grain warehouse at London, Tenn.

F. T. Brown has engaged in the grain business at Cromwell, Iowa, having for a partner F. J. Taylor of Creston.

The Crescent Grain Co., Bloomington, Ill., has sold its Rossville Elevator to W. L. Prillamen of Wellington.

E. E. Cross has just completed a 20,000-bushel elevator in connection with his mill at Ravenswood, W. Va.

Murray Brothers' elevator at Holder, Ill., is completed, and it is said to be a very welcome addition to that town.

The Inter-State Elevator Co. has purchased the elevator at Hubbard, Iowa, formerly occupied by J. E. Johnson.

Cyrus Lane has removed from Mt. Sterling, Ky., to Lexington, and has established a coal, grain and feed business.

The Rockport (Mo) Mail says it is the opinion of everybody that an elevator at the depot there would pay big money.

Witherspoon & Barr of Princeton, Ind., and Frank Woodburn of Hazleton are building an elevator at the latter place.

Mr. Latham has moved the Little Elk Elevator at Little Falls, Minn., about a mile and a half from its former location.

David Grubb is building an elevator at Waldron, Ind. He contemplates putting in a gasoline engine to supply power.

J. Hilt of Bern, Kans., is building an elevator on the site of his roller mill, which was destroyed by fire last July.

A large grain warehouse is being built at Ritzville, Wash., by a Tacoma firm. It will be managed by D. C. Borronette.

McMillan Bros. are arranging to rebuild their elevator at Emerson, Manitoba, which was recently destroyed by fire.

Gapp & Ellis have opened their new 15,000-barrel elevator at Canova, S. Dak. August Shortner will act as their agent.

The Middle Division Elevator at Colfax, Ill., has over 40,000 bushels of oats stored in bins in lumber sheds at that place.

Samuel Carpenter, an elevator man at Severance, Kans., has failed. He was formerly a resident of Kansas City, Kans.

The new Cargill Elevator at Arcadia, Wis., with a capacity of 50,000 bushels, has been completed and opened for business.

The Monte Vista Mill & Elevator Co. will soon commence the erection of a 40,000-bushel elevator at Monte Vista, Colo.

A. E. Siegnor, formerly of Juniata, Nebr., is now, located at Maywood, where he has leased and is operating an elevator.

Armour & Co., Chicago, have decided to add to their elevator capacity on the North Side by building a storage tank annex. This annex will con-

sist of tanks sufficient to hold between 1,500,000 and 2,000,000 bushels. It will be located just south of the "B annex."

The grain elevator of S. W. Oldfather at Warsaw, Ind., was recently entered by thieves and \$500 stolen from the office.

The Sykes, Hodge & Arnold Co. has been organized to carry on the coal, wood and grain business in North Adams, Mass.

Hugh Shepherd, Indianola, Iowa, has traded his farm to L. Silverman of Chicago for a mill and elevator at the former place.

The Marks Grain Co. has been incorporated at Austin, La., with a capital stock of \$1,500, by C. T., C. J. and H. L. Marks.

Frank Ames, the Rutland, Ill., grain merchant, is extending his elevator facilities so as to have storage capacity for 85,000 bushels.

An elevator has been completed at Thrall, Iowa, on the C. & N. W. Ry. Stephens Bros. of that place will have charge of the business.

The Crescent Grain Co. of Bloomington, Ill., has decided to have private telephone wires to its offices at Downs, Covel and McLean, Ill.

Wolf & Fisher have converted the Bruhn store building at Hillview, S. Dak., into a grain house, and opened the same for business.

Weber & Co. are operating their grain warehouse at Blackwater, Mo., and expect to build a large elevator before the next wheat crop.

A new elevator is being built at Ceresco, Nebr., on the site of the one recently destroyed by fire. It is being rapidly pushed to completion.

G. M. Sloan has sold his interest in the Mt. Pulaski (Ill.) Grain Co. and removed to Pekin, in which city he hopes to find a wider field of trade.

James Shearer has rented a warehouse at Lakeville, Ohio, and is buying grain and seeds for the Hicks-Brown Milling Co. of Mansfield.

It is reported that L. L. Torbert wants to establish a cottonseed oil mill at Society Hill, Ala., with a capacity of five tons of meal per day.

N. H. Greene & Son are erecting a large grain warehouse at Ione, Wash., 5 miles east of Ritzville. It will be the first warehouse built there.

The Marshall-Kennedy Milling Co.'s Elevator A, at Allegheny, Pa., is being equipped with a power shovel, separators, and other new machinery.

Henry W. Crowell Sr. has sold his interest in the grain business at Newton, Mass., to a Mr. Dorr of Boston. Failing health caused him to retire.

J. J. Shannon, De Witt, Nebr., has completed an 8,000-bushel elevator at that place. He has also sold his elevator at Plymouth to W. M. Germer.

A linseed oil mill with capacity of 350,000 bushels per year has been started at Fargo, N. Dak. It is said that all needed flax can be bought at that point.

The Northwestern Elevator Co.'s building at Evansville, Minn., is to be moved just west of its present site to make room for the new Interstate Elevator.

Brackman & Ker, proprietors of the oatmeal mill at South Edmonton, Alberta, are about to erect an additional elevator there, and also one at Wetaskiwin.

Brooks & Hollister, the grain and feed men of Batavia, Ill., are building an addition to their structure and putting in a 20-horse power gasoline engine.

Penberthy & Kreger have placed a 10-horse power Fairbanks & Morse Gasoline Engine in their new elevator at Clear Lake, S. Dak. They will grind feed.

Capt. R. B. Stinson has sold his interest in the grain business at Cobden, Ill., to S. A. B. Davie & Son, who will conduct the business at the same place.

The firm of Blythe & Schemberger has been formed by Hattie B. Blythe and A. W. Schemberger to engage in the grain business at Beatrice, Nebr.

It is reported that Chas. E. Sleezer and Arthur Jasirsky have purchased the Blakes sand factory at Millington, Ill., and will convert it into a grain elevator.

The Amenias & Sharon Land Co. of Ameuia, N. Dak., is building a 100,000-bushel elevator at Superior, Wis. The Barnett & Record Co. is doing the work.

The grain firm of D. & G. Brown has closed up its business in Newport, R. I. Mr. Wm. A. Brown, the manager, expects to start in business in the West.

The Decatur Cotton Compress Co. has been incorporated at Decatur, Ala., by W. R. Carr of Anniston, and W. D. Nesbit and J. H. Coughlan of Birmingham, to do a general compress, storage and ele-

vator business. Capital stock \$15,000. The company has acquired the old plant of the Collins Compress Co., and purchased entirely new machinery.

The Citizens' Bank of Frankfort, Kans., has leased to J. E. Chitty the old Lane & Wells elevator. It is being remodeled and put in first-class order.

Frank Ell of Eureka, S. Dak., is changing his warehouse into an elevator. He will also build an office and engine house, and expects to put in a gasoline engine.

The Richmond Elevator Co. is putting up a new elevator, 26x40 feet, 9,000 bushels' capacity, at Emmet, Mich. Power will be furnished by a gasoline engine.

The Winona Seed Co. of Winona, Minn., has been incorporated, with a capital stock of \$25,000. The incorporators are Arthur B., Paul B. and Charles R. Blair.

Frank Stevenson of Westbrook has leased of Abner Allen his grain storehouse and part of his mill in Bridgton, Maine, and will engage in the grain business.

Chris Williams has bought out his partner's interest in the grain business at Stratford, Iowa. He has managed this branch of the business for over two years.

N. A. Robertson, Elkton, S. Dak., has purchased McCarty Bros' elevator on the Burlington R. R. He has put in new scales, dump, and made other improvements.

Supt. E. N. Armstrong, of the T., P. & W. Ry., met a delegation at Gilman, Ill., the other day, to consider the erection of an elevator two miles east of that town.

The Brooks-Griffiths Co. of Minneapolis, Minn., has ceased grinding mixed feed at its East Side elevator and will utilize the elevator as a grain-mixing house.

F. J. Taylor & Son, Creston, Iowa, have leased the Reynolds elevator at Corning for a term of five years, and the junior member will have charge of the business.

Churchill & Co., Buffalo, N. Y., will build a new warehouse for bag grain and seed corn, adjoining their present transfer elevator at Elk Street and the Abbott Road.

The Alamosa Mill & Elevator Co. of Alamosa, Colo., has leased a warehouse at La Jara and B. D. Johnson of Monte Vista is buying grain there for the Alamosa mill.

The Rialto Elevator Co. of Milwaukee, Wis., has been incorporated with a capital stock of \$20,000, the incorporators being C. W. Schneider, N. L. Jenks and R. L. Bennett.

Farmers in the vicinity of Meadows, Ill., recently met at the home of John Stoller and discussed the building of an elevator at Meadows, to be run on the cooperative plan.

Walsh & Gurd have started their new elevator at Tilbury, Ont., and are building one at Haycroft. They are now buying grain at this latter point through H. Holland, Jr.

L. I. Langness of Clitherall, who recently bought the farmers' elevator at Fergus Falls, Minn., from J. H. Grass, has opened it for business, with Albert Linn of Clitherall as agent.

R. G. & C. H. Risser of Kankakee, Ill., have let the contract for the erection of a 30,000-bushel elevator at Secville, where the Wabash crosses the Kankakee & Southwestern Ry.

The 100,000-bushel barley elevator of the Northwestern Malting and Construction Co. at Water and Bridge Streets, Peoria, Ill., is nearly completed. Other improvements will follow.

John Guitar, Jr., P. Freeman and J. H. Guitar have incorporated the Ennis Oil & Mfg. Co. at Ennis, Texas, for the purpose of establishing and operating cottonseed oil mills, etc.

The rebuilding of the Turner-Hudnut elevator at Havana, Ill., is progressing rapidly. Modern machinery will be put in, and the capacity will be nearly double that of the old one.

The merchants of Janesville, Wis., are contemplating the hiring of a first-class grain buyer, to pay the highest market price for grain and produce, as an inducement for the farmers to sell in that market.

Babcock Bros. and Campbell of Dundas, have received from the Minneapolis & St. Louis Ry. a permit to erect an elevator at New Richland, Waseca Co., Minn., and construction work will be begun at once.

W. B. Cooley of Hartford City, Ind., will erect a new elevator on the site of the one recently burned. The framework of the first two stories will be utilized in the new building. A brick engine house will be built apart from the elevator and the old

gasoline engine repaired and used. The elevator will be thoroughly modern both in construction and machinery. It is intended to have it ready for occupancy by December 1.

Frank M. Young, cashier of the Commercial Bank at Bowling Green, Ohio, has purchased the one-sixth interest of the late John Maddy in the Toledo Iron Elevator Co. at Toledo, Ohio.

H. E. McEachron of Wausau, Wis., is putting up grain stores at Marathou City and Stratford to purchase grain for his grist mill. Paul Peters will manage the one at Marathou City.

A grain elevator of 1,000,000 bushels' capacity will be built on the docks of the B. & O. Ry. at Sandusky, Ohio. It is stated that the work of erecting same is to be done by a Chicago firm.

G. W. Maddin has sold his elevator at Charlotte, Ill., to Joseph Grotevant of Healey, and purchased P. Risser & Son's elevator at Thawville, Ill., where he will continue in the grain business.

L. C. Prindle of Southbridge, Mass., has removed his grain business from the store on Central Street to the elevator building on Hook Street, which he recently purchased from H. H. French.

Webberville, Mich., held a special election and voted \$200 as a cash bonus for building an elevator in that village. Those opposing the appropriation threaten to take the matter into the courts.

The Macdonald Engineering Co. of Chicago has just completed a 150,000-bushel elevator at Winfield, Kans., for the Atchison, Topeka & Santa Fe R. R. Richardson & Co. will operate the plant.

P. G. Jones has sold his grain business and residence at Cisco, Ill., to the Crocker Elevator Co. of Maroa, and will embark in business at Decatur. The Crocker Co. is building a new elevator at Cisco.

The Bready, Love & Tryon Co. of Moose Jaw, Assiniboia, are building two more elevators in addition to the eleven they have already erected this season. They are located at Boharm and Caron.

S. W. Flower & Co., the seed and grain firm of Toledo, Ohio, are preparing to put up a three-story and basement stone and brick building 170x87 feet, located at the corner of Ontario and Lafayette streets.

The Business Men's Association of Canton, Ohio, has under consideration a plan to erect a large grain elevator for the purpose of establishing a first-class grain market in that city for the farmers of Stark County.

It is stated that St. Louis, Mo., will probably have a large rice warehouse in the near future. The commission men there and prominent Southern business men are much interested in the proposed enterprise.

L. C. Fleming and W. O. Glines of Sullivan, Ill., have bought the grain elevator at Cushman, of Drake & Hostetter of Lovington, and will buy grain at that point. Riley Howell will be their representative at Cushman.

The grain elevator of H. C. Wright at Schuyler, Nebr., which has been operated by him almost since the first days of Schuyler, on October 1 passed into the possession of E. F. Folda, J. W. Stewart and E. H. Phelps.

The D., G. R. & W. R. R. Company is repairing the old elevator at Lansing, Mich., which has been used during the last two years as a bean house. It will be raised six feet and used by the company as an elevator.

By a vote of 1,370 to 210 the property owners of Kingston, Ontario, on September 15 granted a bonus of \$35,000 to the Montreal Transportation Company to aid it in erecting a 500,000-bushel elevator at that place.

S. M. Isbell & Co., the seed and bean dealers of Jackson, Mich., have purchased the old steam mill site, 196x267 feet, and will at once commence the erection of an elevator to accommodate their increasing bean trade.

The elevator at Ladd, Ill., was recently sold by the Peru Elevator Co. to Peter Herlein; consideration \$2,700. Mr. Herlein is a farmer. Mr. Gallagher, who has had charge of the elevator for the past two years, will conduct the business for Mr. Herlein.

The Chicago O'Neill Grain Co. has leased its elevator at Sulphur Springs, Ill., to Carrington, Hannah & Co. of Chicago, who now have the elevator open for business. W. H. Heywood, the former agent, holds the same position with the new company.

The W. W. Cargill Co. is building an annex to its elevator erected last year at Green Bay, Wis. The new building is located 25 feet north of the present one; is 60x100 feet, and will have a capacity of 500,000 bushels. The contract for the foundation was let to Greiling Bros. of Green Bay. The Cargill

Co. is putting up the buidng under the superintendence of Tromanhanse Bros., and expects to have it completed by December 1.

The Jacksboro Mill & Elevator Co. has been incorporated at Jacksboro, Texas; capital stock \$20,000. Incorporators, Thos. D. Sporer, D. B. Gilliland, E. W. Nicholson, S. W. Eastin, J. W. Simpso and J. W. Ayers, all of Jacksboro.

The Imperial Glucose & Sugar Refining Co., which has been organized with a capital stock of \$3,000,000, is credited with the intention of erecting an immense plant at South Chicago, Ill., which will consume 30,000 bushels of corn daily.

Mason J. Toft has completed an elevator, with a capacity of 9,500 bushels of grain and 1,000 bushels of ear corn, on his farm west of Kingsley, Iowa. He will put in a gasoline engine and feed mill and grind feed for a large lot of cattle.

The merchants of West De Pere, Wis., subscribed \$450 toward building a grain elevator, and the W. W. Cargill Co. is engaged in putting up a building 30x60 feet, with a capacity of 8,000 bushels, and will have a grain buyer stationed there at once.

F. P. Rush & Co.'s elevator at Farmer City, Ill., which was burned on September 4, will be rebuilt in about the same style. When finished, Mr. J. H. Chamberlain of Decatur will become the proprietor, as was contemplated before the fire.

The Nye & Jenks Grain Co. of Chicago has leased elevators A and C at Milwaukee from the Angus Smith Elevator Co. A branch office will be opened in Milwaukee, and the elevators operated to their full capacity, namely, 1,050,000 bushels.

F. C. Baluss & Co., operating an elevator at Blissfield, Mich., with a branch at Ottawa Lake, have established another branch at Clayton, where they will use the Lake Shore Railway's elevator. D. D. Baluss will be the manager and buyer there.

Charles F. Orthwein & Sons, lessees of grain elevator "B" at Galveston, Texas, have ordered two floating elevators to be built for use at Port Arthur. Each will have a capacity of 20,000 bushels. The elevators will be built by James Stewart & Co. of St. Louis.

J. G. King & Co., who operate the scouring and cleaning elevator at Port Arthur, Man., have placed additional machinery for the purpose of removing oats from wheat and barley, a mixture which is said to be quite noticeable in much of the grain of that section.

A grain warehouse is being erected in the wharf yard at Hueueme, Cal. It is 60x260 feet, with corrugated iron roof. In the wharf yard are six other warehouses ranging in capacity from 25,000 to 90,000 sacks, and having a combined capacity of 375,000 sacks.

It is said that the Norfolk & Western R. R. Co. will shortly erect a mammoth grain elevator at Lambert's Point, Va. The elevator will have all modern facilities for storing, cleaning and transferring grain from cars to vessel, so as to enable it to successfully compete with other railroads and shipping points.

The Great Northern Railroad has put up six large grain warehouses along the line of its road in Washington, they being located at the following stations: Edwall, Moscow, Coal Creek, Lamona, Adrian and Wenatchee. These buildings are all 60x160 feet, with an aggregate storage capacity of 800,000 bushels.

Work on the two new elevators at Peoria, Ill., has been pushed so rapidly day and night that the Iowa Central Ry. Elevator is now ready to receive grain, and it is expected that the Union Elevator will also be ready for use by October 25. Peoria grain men are rejoicing over the prospect for better business.

E. C. Murphy & Son, Tuscola, Ill., recently traded their large elevator, situated on the C. & E. I. Ry., to Hugh McKinney for 80 acres of land west of that town. Mr. McKinney at once sold the elevator property to C. N. Mansfield, J. F. Beal and Geo. Jacobson, grain dealers of Niantic. Mr. Mansfield will move to Tuscola and take charge of the elevator on October 19.

J. G. Hickox & Co. will build an elevator on the C., H. & D. R. R. at Bowling Green, Ohio. The building will be 25x75 feet, with capacity of 10,000 bushels. Corn cribs of more than that capacity will be erected near by and connected with the elevator by carriers. The new elevator will have all modern equipments, and will make Bowling Green a competitive buying point.

Churchill & Co. of Toledo and Buffalo are figuring on building a big transfer grain elevator near the new Lake Shore Ry. yards at West Seneca, N. Y., early next year. The officers have been contemplating the erection of a modern transfer elevator, such as the Erie road owns at Chicago, ever since the contractors began building the new terminal road from Blasdell to Depew, as when the new road is finished there will be no place to weigh and

transfer the grain that comes over the Lake Shore and its connecting lines from points east of Chicago. G. W. Bartlett, the Buffalo manager for Churchill & Co., states that the new elevator will probably be a four-legged house, and have adequate accommodations to weigh and transfer about 80 cars in 24 hours.

The Consolidated Elevator Co. of St. Louis, Mo., which is a reorganization of the United Elevator Co., has increased its capital stock from \$200,000 to \$1,000,000, and all preliminary steps taken for floating \$1,000,000 of bonds. It is expected that all of the elevators owned by this company in Missouri and Illinois, and not now in use, will be put in operation in a comparatively short time.

Over \$5,000 has been expended in improvements on the Washburn Elevator at Washburn, Wis. Among the improvements is a dust collecting system which carries all the dust and refuse of the entire plant to the boiler room, where it constitutes a greater part of the fuel required. The other improvements are an electric light and a telephone system, and an office building near the elevator.

Robert T. Harrington, operating two elevators at Marseilles, Ill., closed his doors on October 1 on account of some financial difficulty. Judgments aggregating about \$17,000 have been entered against him. By virtue of attachments issued against the property, the elevators and contents will be sold by the sheriff on October 18. There is estimated to be 41,000 bushels of oats and 21,000 bushels of corn in the two elevators. A good number of farmers are among the losers. Harrington only recently paid up his creditors of a former failure.

A prominent local capitalist, who desires that his name shall not be made public at present, will inaugurate a new enterprise in this city. He will erect a warehouse and buy clover seed on an extensive scale. His theory is that the price of clover seed is unusually low, and that it will appreciate in value at an early day. During a long series of years clover seed has never been so low as the present season. It sells here as low as \$2.50 to \$2.75 a bushel, although the quality is much better than it has been for some time. Last year the quality was poor, but the price ran from \$3 to \$4 a bushel. Four years ago the seed sold in the spring at \$8.25 per bushel.—Pantagraph, Bloomington, Ill.

The new Great Northern Elevator at Buffalo, N. Y., owned by the Great Northern Elevating Co., is completed. The elevator has a capacity of 3,000,000 bushels and was built of brick and steel at a cost of \$400,000. It can take in 600,000 bushels of grain and load 300 cars in 10 hours. There are 30 circular steel bins with a capacity of 85,000 bushels of grain each and 18 with a capacity of 18,000 bushels each. Grain is unloaded from vessels by three marine legs and is distributed to the bins from the top floor. The height of the elevator is 167 feet. Electric power transmitted from Niagara Falls, 23 miles distant, drives the machinery. The company was recently incorporated with a capital stock of \$1,000,000, divided into 5,000 shares. The directors are William C. Farrington of Buffalo, Henry W. Cannon and Frederick W. Babbett of New York City. W. C. Farrington is president and general manager of the company and Frederick W. Babbett secretary and treasurer.

OBITUARY

John R. Fallis, a well-known grain dealer of Minneapolis, Minn., died September 24.

Frederick Lausmau, a grain buyer at Albert Lea, Minn., died at his home on October 6 from pneumonia, aged 46 years.

Edmond S. Cargill, grain dealer of Attleboro, Mass., and owner of large grain elevators at that place, died October 1. He was 50 years of age.

Victor Hexter, one of the most prominent business men of the Palouse country, and a member of the grain and merchandise firm of Alexander & Hexter of Oakesdale, Wash., died recently.

H. Wallace Briggs of Newport, R. I., died very suddenly recently on a train on his way home with his wife from Pittsfield, Mass. Mr. Briggs removed to Newport from Taunton a few years ago and had established a very large and lucrative hay, grain and flour business. He was prominent in social and financial circles in Newport and was a director of the National Bank of Rhode Island.

The death of Charles H. Simpson occurred October 5 at Richmond, Va. For many years he had been the head of the large hay, grain and flour house of Simpson, Bass & Co., and his ability in this line of business was recognized far and wide. He was a native of Coxsackie, N. Y., and 56 years of age. The Richmond Grain & Cotton Exchange closed its doors on October 6 as a mark of respect for the deceased.

COMMISSION

Geo. E. Thayer has engaged in the grain commission business at Kansas City, Mo.

A. F. Osterlind & Co. have opened an office at Stillwater, Minn., and engaged in the grain and stock commission business.

F. O. Sustad has opened a commission house at Minneapolis, Minn. Mr. Sustad was formerly a member of the firm of Sustad Bros.

The Baltimore Grain & Stock Commission Co. of Baltimore, Md., has paid all its liabilities, settled with its stockholders and gone out of business.

The Kramer-Mortimer Grain Co. of Little Rock, Ark., has been incorporated by Fred Kramer, H. N. Kramer and Walter Mortimer, with a capital stock of \$5,000.

Seymour Brothers, stock and grain brokers at 30 Broad street, New York, assigned last month. They did a big business and their liabilities are said to be large.

Geo. E. Burrell, who has been associated with H. W. Shotwell in the grain and feed business at New York City, has succeeded to the business, Mr. Shotwell retiring.

E. J. Hart and Charles Sloan of New York have established a grain commission business in Duluth, Minn. Mr. Hart was formerly an Associated Press operator in Duluth.

B. F. Paxton, until recently with the Kemper Grain Co., Kansas City, Mo., has formed a partnership with Allen Logan. They will engage in the grain commission business.

The C. C. Rogers Co., Milwaukee, Wis., has been incorporated by C. C. Rogers, H. M. Greeu, Fred W. Rogers and Thomas Beecher, to deal in grain and farm produce; capital stock \$20,000.

The Traders' Grain Co., Kansas City, Mo., has filed articles of incorporation. The capital stock of \$10,000 is held by S. C. Lee, Chas. and Geo. E. Thayer of Kansas City, and L. Chamberlain of Springhill, Kan.

The Swart-Hankinson Co. of Minneapolis, Minn., has filed articles of incorporation, with a capital stock of \$50,000, to do a general grain and elevator business. The incorporators are J. F. Swart, H. J. Hankinson and V. S. Ireys.

Baldwin, Gurney & Co. of Chicago have established a branch office in room 314 Exchange building, Kansas City, Mo., and will hereafter be represented in that location by J. K. Davidson, B. C. Christopher and Joseph B. Bracken, with Mr. Bracken as office manager.

The Dunwoody Grain Co. of Minneapolis, Minn., has been organized to carry on a business in corn, oats, flax, etc. The members of the company are F. H. Peavey, W. H. Dunwoody, P. B. Smith, E. C. Michener and John Dunwoody. W. H. Dunwoody is president of the company and H. E. Barber assistant manager.

Wheelock & Co., one of the largest bucket shops on the Pacific coast, located in San Francisco and having branches in several California cities, was forced to suspend on September 9. The suspension was a natural sequence of the steadily rising price of wheat. A settlement and resumption of business is contemplated.

E. A. Grubbs, of the Greenville Grain Co. of Greenville, Ohio, has established a grain receiving and shipping business at Cincinnati, Ohio. The business will be carried on under the name of the E. A. Grubbs Grain Co. Mr. Grubbs' interest in the Greenville Grain Co. of Greenville, Ohio, remains the same. The business at that point will be conducted under the management of Conrad Kipp.

The old grain and provision concern of Geddes, Kirkwood & Co., Chicago, dissolves October 15. Kirkwood and Wells retiring. The partners dissolved in the utmost good friendship, Mr. Kirkwood wishing to retire from active business interests, which he has had in Chicago for the past 35 years, and Mr. Wells wishing to concentrate his attention on his packing interests, so the business is left to the remaining partner, who means to continue it on exactly the same lines, under the firm name of A. Geddes & Co.

The new Minnesota law which provides that grain shall be assessed in the district in which it is stored has led to a contest with the Minneapolis elevator men on one side and the assessors and State Board of Equalization on the other. The elevator men have agreed to pay seven cents per bushel on grain in store, while the board of equalization, apparently not satisfied with this, has called upon the attorney general to define their power in levying an assessment.

PRESS COMMENT

THE BUCKET SHOP FAILURES.

How many people are out and injured by the failure of the bucket shops will probably never be known. As the matter stands, however, the regular exchanges consider the circumstance an excellent object lesson, showing as it does that in most cases the element of security, which should be an essential feature of all business transactions, is apparently conspicuously absent. Chicago was especially rejoiced over the misfortunes of the proscribed bucket shops, and all the play that is usually lost to the market by reason of such blind dealings was employed with effect in the regular channel.—San Francisco Commercial News.

ELASTICITY OF "VISIBLE" GRAIN.

The Armour E Elevator on the Burlington, containing 852,000 bushels of corn, dropped out of the list of public houses last week, and as a result its entire stock of corn dropped out of the visible, and also out of the local public stocks. It made quite a difference in the official figures, although, of course, it makes no real difference in the statistical situation whether the corn happens to be in a public house, with its stocks a matter of record, or in a private house. The effect of this change was to make a surprisingly small increase in the visible, and also to make the increase in the local stock appear 850,000 bushels less than it really was. This elevator has not been "regular" for some time, but it has been working under a state license up to last Saturday, and consequently its stocks have been a matter of record.—Chicago Times-Herald.

A BRITISH DUTY ON AMERICAN GRAIN.

We are rather inclined to believe that a 10 per cent. discriminatory duty imposed by Great Britain against United States wheat and corn would have the effect of bringing the people of Great Britain to their senses by showing them, directly and conclusively, the benefit of a policy of protection to British agricultural interests.—American Economist. A change of policy in that direction on the part of Great Britain would be about the most galling episode ever experienced in American history. Under such a discriminatory duty Canada would, in a very few years, supply all the wheat and corn to the British market that would come from this side the Atlantic, and our American friends know it. It would be of undoubted benefit, too, to British agricultural interests, and a means of cementing the Empire into a vast and homogeneous whole, or words to that effect. It should be tried.—Canadian Manufacturer.

PROPOSED NEW "TERM" MARKET FOR LONDON.

Whatever one may think of the effects upon the wheat trade of dealings in "options" or "futures," there is no disguising the fact that this is a mode of trading which governs the American markets, and which has helped to give the Liverpool market the importance which it now possesses. It is also useless to deny the fact that much of the trading which properly belongs to London as the center finds its way to Liverpool or New York because of the conveniences afforded by the "option" markets in these centers. Under these circumstances we are disposed to hail with satisfaction an effort on the part of the London Produce Clearing House, Limited, to revive a "term" wheat market in London. We are prepared to admit that the trade as a whole would be better—more wholesome so to speak—without "option" trading in any form, but since this method of speculating or of doing business is apparently inseparably connected with the wheat trade, London ought to be in the front in the matter, as befits its position.—Corn Trade Journal, London.

THE EUROPEAN SILO.

We maintain, with all due respect to the English engineer and his unquestioned ability, that his idea of a grain elevator, which he calls a "silo," is a ludicrous thing, an absurdity, an expensive joke. More good money has been sunk in the imposing silos of Europe than in any other branch of the grain-handling or flour-making trade. The waste is enormous. We grant that the silo is more picturesque, and far more imposing, than the elevator. If the idea is to make scenery, the silo does better than the elevator; but if—and we suppose this to be the case—it is to provide a safe, sound, practical, economical means of storing and handling grain, until such time it may be needed for flour, then the American elevator distances its cousin—no, not its cousin, that is too near a relationship—say its grand-uncle on its mother's side—the silo, so far that comparison is impossible. As a castle, a stronghold, a fortification, a donjon-keep,

a place in which to receive foreign visitors, or stable horses, or store powder, or maintain a body of troops, the European silo may do excellently well. We do not know. But, as a practical, modern, nineteenth-century warehouse for grain, it is the funniest absurdity one sees in all his foreign travels.—Northwestern Miller.

DECREASING RESERVES.

How far economy in consumption of wheat will be carried, by scarcity in Europe, is a subject for consideration this year. Several of the larger wheat producers are undoubtedly short in production. These include France, Italy and Austria. It is not to be expected that there will be a call for imported grain to the full extent of the deficiency, and the assurance of such economy affects the situation with buyers now. For the last two years consumers in nearly all countries have drawn upon reserves and it remains to be seen how much farther these may be encroached upon. That the reserves will be lower at the end of our crop year in America and in Europe there can be no question. A realization of this, with the higher prices resulting, will greatly stimulate farmers in all countries to increase the wheat acreage, so that the end of this crop season may see the end of lessening reserves for a few years again.—Minneapolis Market Record.

Court Decisions

Shortages in Grain Cargoes.

A. J. Sawyer & Co. chartered the steamer Frontenac in 1890 to load 81,000 bushels of wheat at the Great Northern Elevators at Duluth. At Buffalo the cargo was 1,502 bushels short. Suit was brought and the New York Court of Appeals held that the boat was liable. The owners paid the consignees and then demanded the balance of the wheat from the Great Northern Elevator Company. The latter refused, claiming the wheat was weighed out by the state grain inspection department of Minnesota, and that it was liable, if anybody. Suit was begun against the Eastern Minnesota Railway, owner of the elevators, to recover the value of the shortage. Judge Moer, of the District Court at Duluth, holds that the company is liable, even though the loading was done under the supervision of the state, the company not having loaded the full amount.

Shortages often occur in grain cargoes, and heretofore the vessels have had to stand the losses, never having been able to make the elevator companies bear them.

Commission Agent Liable for Non-fulfillment of Orders.

The case of H. F. Jory, plaintiff, vs. F. P. Talkington and James Bottger, partners composing the firm of Talkington, Bottger & Co., defendants, wheat and grain brokers of Salem, Ore., was decided by Circuit Judge Burnett of that city in favor of the plaintiff. At various dates and times between Jan. 1, 1895, and Oct. 1, 1896, H. F. Jory, J. H. Cavanaugh, Cooke Patton, A. B. Smith, C. S. Reigsecker, T. W. Staiger and I. L. Kimber, being the plaintiff and his assignors named in the plaintiff's complaint in this action and so hereinafter styled and designated, each acting for himself and not with or for the others, employed the defendants as such commission agents and brokers each for himself, and the defendants as such partners agreed with said above named persons severally to contract for the purchase, in the name of each of said persons, of wheat ostensibly and apparently thereafter to be delivered to each of said persons in Chicago, Ill.; and for the defendants' services to be rendered in said employment each of said persons agreed to and did pay the defendants at the rate of one-quarter of one cent per bushel on all quantities of wheat less than 2,000 bushels, and at the rate of one-eighth of one cent per bushel on all quantities of 2,000 bushels and greater, and all the transactions alleged and set forth in plaintiff's complaint, both with plaintiff and his assignors, were done and had under and in pursuance of such employment of the defendants.

The court held that,

"1. The only relation existing between the plaintiff or any of his assignors on the one hand, and the defendants on the other, in any of said transactions was that of principal and agent; the defendants being in all cases mere agents for the plaintiff and his assignors.

"2. In all of the transactions aforesaid, the contracts which the plaintiff and his several assignors sought to have the defendants make for them, had they been fully consummated according to the terms of the employment of the defendants by the plaintiff and his said assignors, would have been wagering contracts in the nature of wagers on the future price of wheat in Chicago, Ill., and were so intended by plaintiff and his said assignors.

"3. The defendants had no right to mingle the different funds advanced by plaintiff and his assign-

ors with each other or with funds of the defendants or of other persons dealing with them, or to contract in their own names with money advanced to them by the plaintiff and his assignors; and so the plaintiff and his assignors have the right to disavow the act of the defendants in that respect, and this action can be maintained to recover the money so advanced.

"4. The defendants not having contracted in the several and separate names of the plaintiff and his said assignors, the contracts sought to be entered into by the plaintiff and his assignors remain executory to such an extent, as between the defendants and the plaintiff and his assignors, that this action can be maintained in disaffirmance thereof.

"5. The plaintiff is entitled to recover on his own original claim and demand against the defendants and on the claims and demands against the defendants assigned to him by his assignors hereinbefore mentioned, but in no case for a greater amount, but in no case for a greater amount on any demand than as alleged in plaintiff's amended complaint.

"The plaintiff is entitled to a judgment against defendants for the sums of money as before set forth, the total amount being \$3,744.75, and the costs and disbursements of the action."

Carrier, Connecting Lines, Damages.

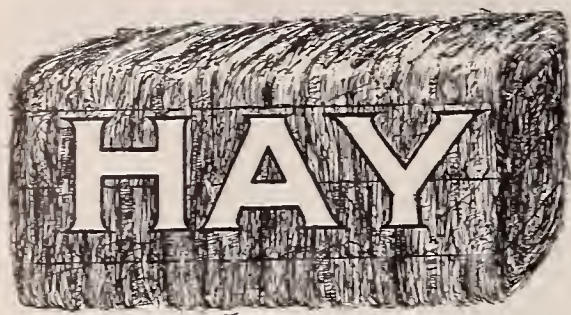
The United States Circuit Court for the Northern District of Georgia held, in the recent case of the Central Trust Company vs. Georgia Pacific Railway Company, reported in the Chicago Legal News, that where the agent of a connecting carrier by mistake gave to a shipper an unusually low rate on a special shipment, and the initial carrier, without knowledge of such rate, broke its contract of carriage by sending the goods over a different road from that mentioned in the bills of lading, so that the shipper was compelled to pay the usual rate of freight, the initial carrier was liable because of the breach only for such damages as might reasonably have been within the contemplation of the parties on making the contract and not for the whole difference between the regular rate and the special rate, of which it had no notice. The court said: "Conceding that the agents of the receivers were put on notice that something less than the usual rate might be allowed for a shipment of this character, can it be held that they must take notice and must contract in contemplation of a mistake on the part of the general freight agent of connecting lines? It is a fact established in the case, and the master so finds, that the rate given by Fletcher, the general freight agent of the connecting lines, being a remarkably low rate when compared with the regular rate, was made by mistake. It cannot be true that the initial carrier can be held to have had in contemplation, at the time goods are received for carriage, that a connecting line would make a mistake as to the rate on the goods given the shipper. It seems, from the facts in this case, that the general freight agent was under a misapprehension as to what the regular rate was. Now, if this general freight agent, with a knowledge of what the regular rate was, had made some reasonable deduction from it, and the proof showed that such reduction was usual, or even frequent, in a shipment of unusual character, and a recovery was based on such facts, there would be some ground for sustaining it under the rule contended for on the part of the intervenor. Such are not the facts here, however."

OUR CALLERS

We have received calls from the following gentlemen prominently connected with the grain and elevator interests, during the month:

J. D. Law, Morocco, Ind.
C. Rider, Kentland, Ind.
T. H. Nixon, Attica, Ind.
L. H. Swan, Wadena, Ind.
H. P. McCrary, Yeddo, Ind.
G. H. Apgar, Newark, N. J.
Joseph Ulrey, La Place, Ill.
L. T. Hutchins, Sheldon, Ill.
O. P. Taber, Remington, Ind.
A. G. Jakway, Goodland, Ind.
John F. Barnard, Fowler, Ind.
A. E. Hartley, Goodland, Ind.
Robt. Bell, East Fowler, Ind.
W. T. McCray, Kentland, Ind.
S. J. Tiernan, Burlington, Iowa.
L. H. Blankenbaker, Brook, Ind.
O. P. Merriek, Pine Village, Ind.
W. D. Foresman, Foresman, Ind.
Theo. McGinnis, New Orleans, La.
H. D. Hamper, Winfield, Kans., representative of the Macdonald Engineering Co.
J. L. Wheeler, representative of the Invincible Grain Cleaner Co., Silver Creek, N. Y.
Edward A. Ordway, representative of the Invincible Grain Cleaner Co., Silver Creek, N. Y.

The elevators of Superior, Wis., are credited with preparing to handle more corn this year than ever before.



H. Gregory has put up a storage warehouse for hay and grain at Redlands, Cal.

W. E. Rickey has succeeded W. E. Rickey & Co., wholesale hay dealers of Carlisle, Ark.

E. Hancock, of the firm of E. Hancock & Co., hay dealers and grocers of Nashville, Tenn., is dead.

George Shelhous has succeeded George H. Nichols, hay and feed dealer of Norwalk, Conn.

Joseph Braunecker has purchased a building at Plymouth, Mass., and will establish a hay and grain business.

Jacob Clasen's barn and hay shed near Long Lane, Minn., were burned September 27, with 60 tons of hay.

Prof. Joseph Wright of Columbus, Ind., lost 30 tons of hay and 400 bushels of wheat from fire on September 29.

Richard A. O'Brien has left St. Hyacinth, Que., and has engaged in the wholesale hay and straw business at Marshall, Mich.

Wm. Rimstidt's warehouse at Graud View, Ind., containing 50 tons of hay, was destroyed September 25 by a fire of incendiary origin.

William McCoy, a farmer residing near Spring Valley, Minn., lost 60 tons of hay and 2,000 bushels of oats by fire September 27.

James Walpole's large barn at Rock Valley, Iowa, was burned September 21, together with a large quantity of hay and wheat. Loss \$3,000.

The St. Louis Hay & Grain Co. has been incorporated at East St. Louis, Ill., by Fred Deibel, Jas. W. Dye and Thomas Brown; capital stock, \$10,000.

A large amount of hay, 1,600 bushels of wheat and 30 bushels of clover seed, owned by J. Ferguson, near Homer, Mich., was destroyed by fire September 29.

It was estimated that over 12,000 tons of hay were burned in a destructive fire which swept over Lake township in Emmet County, Iowa, on September 30.

Ham & Co., hay and grain dealers of Woburn, Mass., have rented of J. M. Harlow the mill now operated by Mr. Jaquith and will take possession Jan. 1, 1898.

The Harrison Grain & Hay Co. of St. Louis, Mo., has filed articles of incorporation. The incorporators are W. B. Harrison, W. S. Scott, A. P. Richardson and others.

A storage barn for baled hay at Pittsburg, Kan., owned by the Kansas & Texas Coal Co., was burned September 25. Loss on building and hay \$1,700. A full insurance was carried.

The grain house of J. W. Tate at Centralia, Ill., was burned September 25, together with several tons of hay and 500 bushels each of corn and oats. Loss \$5,000; insurance \$2,500.

The Hereley Hay & Grain Co. of Chicago, Ill., has been incorporated with capital stock of \$15,000. The incorporators are John V. Clarke, Adam F. Fraser, and Frederick S. Hebard.

The fine new hay barn of Lee & Aitken, just outside of Flint, Mich., was completely destroyed by fire September 30. The building was 40x100 feet and contained nearly 150 tons of hay.

The large hay and grain warehouse of W. F. Holmes at Cambridge, Mass., was burned October 3. The loss was estimated between \$1,500 and \$2,000. He will rebuild on the former site.

The John H. Leppelmann Hay, Flour and Grain Company of St. Louis, Mo., has filed notice of decrease of capital stock from \$10,000 to \$8,000. The assets are given as \$8,500 with liabilities of \$500.

The total acreage of hay in the United States in 1897, according to the Orange Judd Farmer, aggregated 43,978,000, with an average yield in tons per acre of 1.53, making an entire crop yield of 67,150,900 tons.

To facilitate the transportation and preservation of hay an apparatus has been devised at Buenos Ayres for compressing it to one-tenth its normal bulk. In this form, as "hay biscuits," it can be preserved dry and sound an indefinite period, without losing its flavor or value as food.—Indiana State

Journal. It seems evident that the Journal has not yet heard of hay presses.

Brice Sherman's granary at Summer Hill, N. Y., was burned September 27. His entire season's crop of hay was burned. The fire was supposed to have been of incendiary origin. Loss \$2,000, with small insurance.

The large barn at Dotys Corners, near Canaseraga, N. Y., owned by Clark C. Fritz, was burned September 26. About 15 tons of hay, 359 bushels of wheat and 400 bushels of oats were consumed. Loss \$6,000, with a partial insurance.

Three stacks of hay containing 50 tons at Benton, Wis., were burned September 6. The hay was owned by George Sellick and was valued at about \$400. The fire was supposed to have been of incendiary origin. There was no insurance.

T. W. Russell, hay commission merchant and grain dealer of Kansas City, Mo., has been appointed coal oil inspector in that city. He will conduct the office by deputy and continue to give his personal attention to his hay and grain business.

Some shippers of hay are falling into the habit of drawing against bills of lading for 50 per cent. more than the market value of their hay. When the quality of the hay is poor, drafts for more than the value of the hay will invariably be returned. Shippers should bear this fact in mind in making consignments.

There has been much complaint in the eastern markets over the large amounts of lower grades of hay which have been arriving from the West. Eastern dealers say that the market is glutted with stocks of the clover and clover mixed, No. 3 timothy and rejected varieties, and that it would pay farmers much better to feed these varieties than to try to market them under present conditions.

Shippers of hay make a great mistake in attempting to put 160 pounds to 180 pounds in a three-quarter bale in order to get 15 or more tons in an ordinary car. The trade for the most part demands a lightly packed bale as that which is pressed too hard becomes caked and is rendered unsalable. It is the consumer, after all, who is the final judge of the value of hay, and his wants should be catered to in order to secure the best prices.

One of the standing jokes of the blue grass region is the fact that "blue grass" is green. People who visit the famous rich grazing country found in Kentucky are often the subject for jokes when they want the "blue grass" pointed out. But there is a blue grass, a sample of which can be found growing at the Department of Agriculture, which is as blue as a cloudless sky on a summer day. It is a native of the Apache country and can be found all through New Mexico and in some of the adjoining states.—Washington Star.

From time to time complaints come to dealers that the bale of hay which to all appearance was a first-class article, was filled inside with rubbish, such as thistles, bushes, weeds, leaves and other waste material. There are very few people who so pack hay, but it is a fact that a few such rascally varlets exist. In order to put an end to such trickery a general law should be passed to compel every farmer, or every shipper who bales hay to stamp his full name and address on each bale. The state of New York has such a law, and other states should fall in line.

The hay inspectors are having considerable trouble with the hay used for cattle feed on steamers, and they have now stopped Lower Canada hay on account of its not grading No. 2. The heavy rains caused the hay to be very dark in color, and very grassy; but it is said to be preferable to a great deal of the Western No. 2, which is very coarse. The long rank timothy hay coming from the Province of Quebec will not grade No. 2, but the inspectors are now allowing it to pass for the ocean voyage for feed, providing they put on 25 pounds per head of cattle extra, which they believe will counterbalance the difference arising from poor quality.—Montreal Trade Bulletin.

The export trade in Canadian hay must necessarily be very limited for some time to come, owing to the scarcity of ocean freight room from Montreal, Boston and New York. The only hay going forward from this port is chopped hay on former contracts at 12s. 6d. to 15s. per ton to U. K. ports, and, after these are finished, it is feared there will be no more hay space available before January next. American ports, it is said, will be just as badly off, so that although the United States has a large surplus crop, she will be unable to export any great proportion of it for want of ocean space, except at rates that shippers could not pay. Ontario has an estimated crop of 3,800,000 tons, but she has not sufficient cattle and other home needs to consume more than 2,000,000 tons; and, poor as the crop of this province is, there will be a surplus for export. Consequently, it seems that the United States and Canada will be thrown largely upon their own home resources for the consumption of the crop, unless, of course, the British markets ad-

vance sufficiently to admit of shippers paying the high rates of ocean freight, which is scarcely probable. The outlook, therefore, is not at all cheering for high prices in either the United States or Canada.—Montreal Trade Bulletin.

It has been suggested that at the next annual meeting of the National Hay Dealers' Association the hay inspectors of the larger hay markets should attend and give a practical demonstration of what constitutes the several grades in their respective markets. Although the rules for grading as adopted by the National Association are supposed to govern the hay markets, yet there is such wide interpretation of the rules in accordance with the requirements of different markets that the results are anything but uniform. It is felt that should the requirements of the different markets be better known, there will be less confusion and less uncertainty as to how the shipments to the various markets will grade.

It is interesting to note the different sized bales of hay, and the manner of their designation, in the different hay markets. The trade of New York City, Brooklyn and Jersey City demands, as a rule, large bales. In the New York market hay, for the most part, is found in bales of three sizes only. The first of these is termed "Large Bales" or Big Hay, and are about 22x45 inches in size, averaging in weight about 200 pounds. Hay baled in this manner will generally command from 50 cents to \$1 per ton more than in the smaller sized packages. The second size is known as "halves," or half bale hay. They are 17x22 or 18x22 in size, and weigh about 150 pounds. The third sized bales are termed "thirds," or third bale hay. They are about 14x18 inches, weighing about 100 pounds. They are known also locally as "Sooners," from the fact that a truckman in hauling them said that such bales would sooner lie down than stand up. Hay in bales 17x17, weighing about 120 pounds, is also designated third bale hay. In quotations and in trade "Large Bales" refer to the first-class only.

Brooklyn and Jersey City buyers take "thirds," and exporters and cattle shippers will have only small bales if they can be found in the market, as there is a great saving in ship space in their use.

In the Pittsburg market hay is hauled principally in bales of two sizes. There is the two wired or small bale weighing about 100 pounds, and the three wire bale which weighs about 125 to 150 pounds. The city trade, for the most part, prefers the three-wired bale, although the retail dealer prefers the small bale for the reason that a large share of his customers prefer as small a package as possible. The exchange makes no distinction in the size of the bale in its quotations.

Hay arrives in Philadelphia in three different sized bales. The largest of these weighs about 200 pounds; the three-quarter bales range from 125 to 150 pounds, and the small or block bale ranges from 90 to 100 pounds. The smallest size is generally the most popular, although the larger size will sometimes bring a better price than the three-quarter or small bale, provided the hay is of the very best quality.

There are three sizes of bales on the Chicago market, although they are classified as only two sizes. These three sizes are 14x18, 16x18 and 17x22. They are spoken of as small and large bales, or two-wire and three-wire bales. The first two sizes are called small or two-wire bales, and will weigh from 70 to 100 pounds. The third size, or three wire bale, will weigh from 100 to 150 pounds. The most popular size in the Chicago market is the two-wire bale pressed to weigh from 70 to 90 pounds. The retail dealer prefers light, small pressed hay for the reason that it is easier to handle.

REVIEW OF CHICAGO HAY MARKET.

The prices for hay ruling in the Chicago market during the last four weeks, according to the Daily Trade Bulletin, were as follows: During the week ending September 18 the receipts were 5,368 tons, against 5,482 tons the previous week. Shipments for the week were 242 tons, against 394 tons for the previous week. The offerings of strictly choice sound Timothy were light during the week and a good demand existed. The market ruled firm, but toward the close a slight advance in prices was established. Poor and medium grades were in liberal supply and extremely dull, making it difficult to dispose of consignments. Prairie hay ruled steady. Choice grades were in fair request, but poor hay was very dull.

During the week ending September 25 the receipts were 5,578 tons, against 5,368 tons for the previous week. Shipments for the week were 226 tons, against 242 tons for the previous week. Low and medium grades of Timothy Hay were in large supply. The demand was light and the market ruled extremely dull. Strictly choice Timothy was in light supply and the inquiry was good. The market ruled firm. Prairie hay was dull throughout the week. The offerings were large and the demand was light from all sources.

During the week ending October 2 the receipts were 5,728 tons, against 5,578 tons the previous week. Shipments for the week were 138 tons, against 226 tons the previous week. The offerings

of strictly choice Timothy and Upland Prairie continued light and the inquiry good. The bulk of the arrivals consisted of poor and medium grades with little or no demand for them. Receivers found it almost impossible to effect sales. Sales of Choice Timothy ranged at \$9.00@9.50; No. 1, \$7.50@8.50; No. 2, \$6.00@7.50; No. 3, \$6.50; Not Graded, \$5.50@7.50; Choice Prairie, \$7.25@8.00; No. 1, \$6.50@7.25; No. 2, \$5.00@5.50; No. 3, \$4.50@5.00; No. 4, \$3.75@4.00. Rye straw sold at \$5.50@6.00, and Oat straw at \$4.00.

During the week ending October 8 the receipts were 4,965 tons, against 5,728 tons for the previous week. Shipments for the week were 538 tons, against 138 tons for the previous week. The arrivals of Choice Timothy and Prairie Hay were only moderate, and a fair local demand existed. Prices ruled steady and toward the close rather firm. The market was overstocked with poor and medium grades, for which there was scarcely any demand, and receivers found it difficult to dispose of consignments. Prices ruled irregular, depending entirely on the conditions. Sales of Choice Timothy ranged at \$9.00@10.00—outside for fancy. No. 1, \$8.00@8.50; No. 2, \$7.00@7.50; Not Graded, \$6.00@8.00; Choice Prairie, \$7.00@8.00; No. 1, \$6.50@7.00; No. 2, \$5.00@6.00; No. 3, \$4.00@5.00; No. 4, \$3.50@4.00. Rye straw sold at \$5.25@6.00, and Oat straw at \$3.50.

NATIONAL HAY ASSOCIATION'S COMMITTEES.

Editor American Elevator and Grain Trade:—The president of the National Hay Association, E. L. Rogers of Philadelphia, Pa., has appointed the following committees:

TRANSPORTATION COMMITTEE.

John J. McCaffrey, chairman, Pittsburg, Pa.
Justin Brewer, Ada, Ohio.
F. D. Voris, Neoga, Ill.
W. R. Mumford, Chicago, Ill.
S. Burkett, North Manchester, Ind.

LEGISLATION COMMITTEE.

Willis Bullock, chairman, Canajoharie, N. Y.
J. A. Heath, Lenox, Mich.
D. G. Stewart, Pittsburg, Pa.
L. W. Dewey, Blanchester, O.
S. Merrill, Meadville, Pa.

ARBITRATION AND INVESTIGATION COMMITTEE.

P. W. Pitt, chairman, Baltimore, Md.
G. S. Blakeslee, Chicago, Ill.
H. Lee Early, Cincinnati, O.
W. R. Breckenridge, Kankakee, Ill.
E. A. Lee, Rushville, Ind.

Very sincerely yours, F. F. COLLINS,
Secretary and Treasurer.

Cincinnati, Ohio.

The hay dealers of Buffalo, N. Y., have effected a permanent organization. A meeting of the dealers was held at the Merchants' Exchange on September 15, at which they unanimously agreed to form the Buffalo Hay Dealers' Association. The following officers were elected: C. E. Pollard, president; W. D. Jones, vice-president; Fred. G. Langner, secretary and treasurer. Some of the objects to be attained by the association are the perfecting and enforcing of the grading system; the establishment by the railroads of warehouses for the unloading and weighing of hay, and the adoption of better business methods in which both buyer and seller, the shipper and the commission man are equally interested. The hay business in Buffalo has been increasing and the association can surely accomplish a great deal of good.

With the great rush of grain into Chicago the shipping trade is rapidly passing into the hands of the elevator companies. The last of the companies to go into the shipping trade was the English system of elevators, its representative, the Weare Commission Company, having entered the business recently, with direct New York connections. Vessel men believe that within two years all the big elevator companies will have their own elevators at Buffalo or Erie and will also have elevators which they control at seaboard points.—Chicago Chronicle.

No. 2 Clover is so graded for many reasons. Dirt (sticks, sand, etc.) in seed will make it No. 2, brown seed will also make it No. 2; likewise buck-horn, which is a bright brown, shiny seed, shaped something like a kernel of wheat or an Indian canoe. Dock seed will also prevent seed from grading Prime. Dock seed is a brown seed, of triangular shape. Pigeon grass looks like timothy seed. Smartweed is also abundant—you can't help but tell that—it's black, shiny seed, flat shape. Ironweed is also black, but round and small. There is also a foreign seed called ragweed; also foxtail and plantain, but it is difficult to describe them. Too much of the above weeds, dirt, etc., will make the seed rejected and sold accordingly.—Zahm's Circular, Toledo.

WATERWAYS

S. Gildersleeve & Son are building an 8,000-bushel grain barge at Middletown, Conn.

The steamer J. J. Hill, laden with 42,500 bushels of corn from Chicago to Prescott, went aground on Buckeye Shoal early on the morning of September 24.

The Canadian Minister of Finance sailed recently for England to float a \$10,000,000 loan. A part of this amount will be expended in deepening the Canadian canals.

The British steamer Algoa has been chartered to carry a load of 12,000 short tons of wheat from Tacoma, Wash., to the United Kingdom. This enormous cargo will be shipped about the first of November.

It is estimated that the cargoes of wheat that will be loaded this season at Tacoma, Wash., will aggregate approximately 10,000,000 bushels. This will double the shipments of 1891, which established a record of 5,000,000 bushels.

Arrangements are being made for the organization of the St. Louis and New Orleans Barge Line Co. at St. Louis, Mo. The company will be capitalized at \$250,000, and its purpose will be to build a number of steel barges to run between the ports of St. Louis and New Orleans the year round.

The British steamship American left New Orleans for Liverpool on September 11, carrying the largest cargo of grain that ever cleared from that port. The cargo comprised 228,800 bushels and 1,000 sacks of corn, 64,000 bushels of wheat, 2,899 sacks of cotton and seed meal and 200 bales of cotton.

What is now required on the lakes is a self-trimming steamer. We call the attention of our vessel builders to this fact, although knowing that one or two of the designers have attempted to reach the point required. Coal, iron ore and grain should be trimmed automatically and will be if the inventive powers of consulting engineers and shop constructors are up to date. There is no reason why bulk cargoes should not be placed where wanted without other manual labor after it is poured into the holds of vessels.—Marine Record.

There is a great deal of complaint expressed by boatmen on the Erie Canal that the canal officials are not pushing the work of repairs and improvements for which the state of New York has provided ample funds. It has been nearly two years since the people of the state ratified by an emphatic majority vote the proposition to expend \$9,000,000 in improving the Erie, Oswego and Champlain canals. In many places improvements are very badly needed and it is hoped by all parties interested in these three canals, that all necessary improvements from end to end shall be completed before the opening of navigation next May.

Additional improvements are contemplated in the canals which connect the waters of the great lakes between Chicago, Buffalo and Duluth. At the present stage of water in the channel in St. Mary's River there is a depth of only 18 feet at the middle Neebish. Contracts were let August 31 to increase the depth of the channel at that place to 21 feet and widening it from its present width of 300 feet to 320 feet or more, providing a uniform depth of 20 feet throughout the river. It was also arranged to widen the channel at Round Island Shoals from 300 feet, the present width, to 800 feet, and for widening the west approach to St. Mary's Falls Canal from its present width of 600 feet to 1,000 feet.

Though the development of freight and passenger traffic on the great lakes has added so largely to our national wealth and to our possession of an auxiliary war defense, its extent is not appreciated fully upon the seaboard. It seems to be accepted in a hazy way that the lake fleet exists and possibly prospers, but its magnitude, its superiority in many essentials of construction and employment is not recognized. And yet nearly 250 iron or steel steamers, aggregating 450,000 tons, and double this number of oak vessels, steam or sail, are annually employed, while last year 117 modern steamers, exceeding 108,000 tons, were built.—New York Herald.

The Deep Waterways Commission, which was appointed to ascertain the practicability of constructing a ship canal to connect the great lakes with the seaboard, has decided upon a route and made an estimate of the cost of the canal over that route. The commission would connect Lake Erie with Lake Ontario by running a canal across the northwestern corner of the state. It would commence again at Oswego and from there construct a canal to the Mohawk River, which it would follow to the Hudson. The commission estimates the cost of the canal at about \$82,000,000. It was thought that

such a canal would furnish a waterway for almost all the cargo vessels of the lakes. The three members of the commission are Alfred Noble of Chicago, George Y. Wisner of Detroit, and Major Raymond, U. S. A. The headquarters of the commissioners is located at Detroit. A survey of the proposed canal will be made at once.

There have been larger cargoes of grain carried this season on the great lakes than ever before. A large amount of grain has been moved and vessels have loaded to their utmost capacity, with the result that the record for large shipments has been broken repeatedly. At the close of April the Carnegie sailed from Duluth with a cargo of wheat on board of 182,000 bushels. The steamer Crescent City left Duluth on May 1 with 252,099 bushels of barley and oats. On May 6 the steamer L. C. Waldo carried 169,346 bushels of flaxseed to Toledo. On May 9 the schooner Carrington carried out the largest grain cargo ever loaded in Chicago River. It had on board 123,000 bushels of corn and 79,417 bushels of oats, a total of 4,834 tons. The Zenith City on May 13 took on a mixed grain cargo of 5,463 tons at Duluth. The Crescent City sailed from Duluth on May 14 with 311,000 bushels of oats. The steamer Carnegie loaded at Duluth on May 27 171,000 bushels of oats, 51,000 bushels of wheat and 55,000 bushels of barley, making a total of 5,520 tons. On September 13 the Empire City loaded at Duluth 6,168 tons of wheat, or 205,445 bushels.

PERSONAL

S. McCloud has been appointed chief grain inspector at Sheldon, Ill.

O. O. Swanson has resigned his position as grain buyer at Warner, S. Dak., for the Crown Elevator Co.

W. T. Nancy of Aberdeen, S. Dak., has secured the position of grain buyer at Warner for the Crown Elevator Co.

C. E. Smith has removed from Galva, Ill., to Ottawa, where he has resumed his old position in the grain business.

O. J. Frost, formerly of Diller, Nebr., has removed to North Branch, Minn., and engaged in the grain business at that place.

H. W. Shotwell, an old and esteemed member of the grain and feed trade at New York City, has retired from business.

A. Harrington has been appointed manager of the elevators of the Great Northern Railway, located at Minneapolis and Duluth.

Ed. Davis has secured a position as grain buyer at the grain elevator at Farmington, Ill., for the Buckley, Pursley Co. of Peoria, Ill.

N. M. Davis, formerly of Mt. Carroll, Ill., has removed to Savannah and taken charge of the Bosch-Ryan Grain Co.'s elevator at that place.

Frank Lambertson, formerly manager of the grain elevator of Mullaney & Scroggs at Beresford, S. Dak., has taken charge of the elevator at Tyndall.

Thos. McMorro, formerly grain buyer at Farmington, Ill., for the Buckley, Pursley Co. of Peoria, has taken charge of the new grain elevator at Farmington.

A. T. Ward, formerly manager of the business at Sheldon, Ill., of the Cleveland Grain Co., has gone to Cleveland, Ohio, to assist in the management of the company's home affairs.

R. O. Penniwell, until recently grain buyer at Del Rey, Ill., has secured a position as manager at Sheldon, Ill., of the interests of the Cleveland Grain Co. of Cleveland, Ohio.

F. S. Cowgill, president and manager of the Transmississippi Grain Co. of Omaha, Nebr., was married recently at Richmond, Ky., to Mrs. Mildred Adams Chase of that city. They will reside in Omaha.

Robt. Bennett, formerly foreman at the Washburn Elevator at Washburn, Wis., has taken charge of the Smith Elevators A and C at Milwaukee, recently leased by the Nye & Jenks Grain Co. of Chicago, Ill.

Samuel S. Samuels, a member of the stock and grain brokerage firm of Semler, Parshall & Co., Cleveland, Ohio, and Miss Abbie Danziger of Canton, Ohio, were married on the evening of October 6, in the parlors of the Hollenden hotel at Cleveland.

W. P. Cook, of the L. Fowler Grain & Commission Co., of Pine Bluff, Ark., was married September 27 to Miss Fannie Marsh Welch of Ravenden Springs. Both bride and groom have a large circle of friends who wish them every happiness in their new life.

THE MARKETS

[We will be pleased to publish under this head short reviews of the conditions ruling in the different markets. Copy must reach us by the morning of the 14th of each month.]

Grain report of Collins & Co., Cincinnati, Ohio, Oct. 8. While the Northwest has experienced some little relief from light rains the general situation is as yet unchanged, and drouth conditions continue to be widespread, and intensified over a large section of the country. Relief is daily anticipated and changed conditions are more than probable very shortly, which would quickly allay present apprehensions. The effect of the present dry weather would be far reaching, and its influence on the markets readily felt, were it not for the fact that the season's crops had an opportunity to mature before the drouth set in. Trade conditions rule quiet, as there is but little disposition to market grain under present values and the prevailing lack of moisture, and on the other hand stocks on hand which have been fairly liberal are gradually being depleted—the undertone of the market shows more firmness, with the possible exception of corn, the new being in an exceedingly dry condition for an early marketing, and the old is inclined to rule somewhat easier under the anticipated early movement of the new crop. WHEAT—The receipts here rule very small, hardly sufficient to meet trade requirements, and the market is firm at higher prices. No. 2 Red at 93½ to 94 cents, No. 3 Red at 91 to 93 cents as to quality. Sample lots range from 75 to 85 cents as to quality and condition. CORN—Old corn is being marketed more freely. It is expected that the new crop will be in a dry enough condition to grade now very soon, and the arrivals of new shelled are daily expected. The demand rules fairly active at slightly lower prices. No. 2 White at 30½ to 31 cents, No. 3 White at 29½ cents, No. 2 Mixed and Yellow at 29½ to 30 cents, No. 3 Mixed at 28½ to 29 cents. EAR CORN—Easier and lower under the influence of the new crop offerings. Choice Old Yellow at 29 to 30 cents, Mixed and White at 28 to 29 cents as to quality. New in good condition at 26 to 27 cents for Yellow, and 25 to 26 cents for Mixed and White. OATS—Show more firmness and a good active inquiry exists for all offerings, with good heavy Mixed being particularly scarce and inquired for. Choice heavy White Iowa Clipped at 24½ to 25 cents, Ordinary No. 2 White at 23½ to 24 cents, No. 3 White at 22 to 22½ cents, Rejected White at 19 to 20 cents, Choice Mixed at 21½ to 22 cents, No. 2 Mixed at 21 to 21½ cents, No. 3 Mixed at 20 to 20½ cents, Rejected Mixed at 18½ to 20 cents, as to quality. RYE—Steady to firm. Receipts and demand only moderate. Choice Milling at 47 to 48 cents, No. 2 at 46 cents, No. 3 at 43 to 45 cents, as to quality. HAY—Receipts for the week 1,912 tons, shipments 1,100 tons. The tone of the market shows some improvement and little better values are being realized for the best grades. Arrivals are not so large and average some better in quality. It is not expected that any material improvement in prices can be long maintained until later in the season, as the crop of Timothy to be marketed is exceedingly large, with the preponderance of the crop of an inferior quality. Choice at \$9.25 to 9.50, No. 1 at \$8.50 to 8.75, and occasionally \$9.00 can be obtained for best quality of this grade. No. 2 at \$6.75 to 7.50, No. 3 at \$4.60 to 5.50. No. 1 Clover Mixed at \$7.00 to 7.50, No. 1 Clover (bright green, well cured) at \$6.50 to 7.00, No. 2 Clover and Clover Mixed range from \$4.50 to 5.00. Prairie is very little inquired for. Straw is steady with bright wheat at \$1.00, and Rye at \$1.50 at 5.00. MILL FEED—Is steady and firm with the offerings small. Bran at \$10.75 to 11.25. Middlings at \$12.50 to 13.50, the outside for White in bulk. When sacks are included \$1.00 more a ton is asked.

Grain report of Jos. V. Ferguson & Co., New Orleans, La., October 9. HAY—There is absolutely nothing new to report in the condition of this market during the past week. Trade continues demoralized and there is no life to the market. There is only a small local demand prevailing and it takes but little to supply their requirements. We quote our market as follows: Choice to Fancy \$13.50. Strict Prime or No. 1 \$11.50 to 12.50. Good Prime \$10.50 to 11.00. Ordinary Prime \$9.50 to 10.50. OATS—Market unchanged since last reports, but nothing being done as shipping orders are quite slow. We quote: Choice Mixed (sacked) 26 to 26½ cents, No. 2 25½ to 26 cents. CORN—In good supply and demand is only small. We quote: Choice Yellow 39 cents, White 36½ to 37 cents, Mixed 37 to 38 cents. WHEAT BRAN—In moderate supply. Quotable 60 to 62½ cents.

RECENT SALES OF ELEVATOR MACHINERY.

We take the following from an extensive list of elevator machinery sold by the Barnard & Leas Mfg. Co. of Moline, Ill., during the month of September:

ALABAMA: Alabama Cotton Oil Co., Huntsville, one Barnard's Cotton Seed Hull Packer; for same company at Demopolis, one Barnard's Cotton Seed Hull Packer.

ILLINOIS: McFadden & Co., Havana, one No. 2 Victor Corn Sheller; Mercer & Neal, Peru, one No. 5 Barnard Warehouse Separator; St. Paul & Kansas City Grain Co., Savanna, one No. 4 Barnard Elevator Separator; W. W. Stephens & Co., Chicago, one No. 1 Victor Corn Sheller; Turner-Hudnut Co., Pekin, one No. 3 Cornwall Corn Cleaner.

INDIANA: Wilkinson Bros., Knightstown, one No. 0 Cornwall Corn Cleaner, one No. 0 Victor Corn Sheller; McBride & Cohee, Mays, one No. 0 Barnard Victor Combined Sheller and Cleaner; J. W. Wikoff, Falmouth, one No. 1 Victor Corn Sheller and Cleaner combined; Star City Machine & Foundry Co., Lafayette, one No. 3 Cornwall Corn Cleaner, one No. 3 Victor Corn Sheller; D. A. Gillespie, Logansport, one No. 2 Little Victor Corn Sheller and Cleaner.

IOWA: L. A. Funk, Sigourney, one combined corn sheller and cleaner, one platform scale, shafting, sprockets, cotton and rubber belt, etc.; K. Boitscha, Nichols, one 9x13 Frost 25-horse power engine, one No. 8 Frost 30-horse power boiler, one No. 2 Victor Corn Sheller, one No. 2 Cornwall Corn Cleaner, iron elevator boots, pulleys, belt, conveyors, etc.; J. M. Shaler, Chelsea, one Victor Corn Sheller; Sims & Houghton, Portsmouth, one No. 1 Victor Corn Sheller, one No. 1 Cornwall Corn Cleaner; Des Moines Mfg. & Supply Co., Des Moines, one No. 0 Victor Corn Sheller, one No. 0 Cornwall Corn Cleaner.

KANSAS: Great Western Mfg. Co., Leavenworth, one Little Victor Corn Cleaner, one Little Victor Corn Sheller; Lockwood Scale & Elev. Mfg. Co., Winfield, one No. 34 Barnard Special Grain Separator; Wellsville Grain & Lumber Co., Wellsville, one No. 2 Cornwall Corn Cleaner.

LOUISIANA: Phillip Rahm, New Orleans, one No. 36 Barnard Special Grain Separator.

MANITOBA: Watrous Engine Works Co., Winnipeg, one No. 33 Barnard Special Grain Separator; three No. 35 Barnard Special Grain Separators.

MICHIGAN: H. W. Rickel & Co., Detroit, one No. 5 Barnard Elevator Separator.

MINNESOTA: G. W. Van Dusen & Co., Minneapolis, one No. 3 Barnard Elevator Separator.

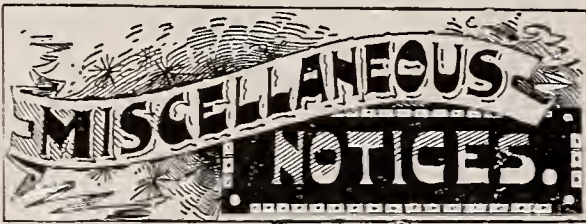
MISSOURI: Essmuller-Heyde Mill Furnishing Co., St. Louis, one Little Victor Corn Cleaner.

NEBRASKA: Seeley, Son & Co., Fremont, one No. 1 Barnard Warehouse Separator, one No. 1 Cornwall Corn Cleaner; G. G. Vreeland, Juniata, one No. 3 Barnard Warehouse Separator.

OHIO: I. & E. Greenwald Co., Cincinnati, one Barnard Cotton Seed Hull Packer; W. Drew & Son, Delisle, one No. 2 Victor Corn Sheller.

SOUTH CAROLINA: Cameron & Barkley Co., Charleston, one No. 35 Barnard Special Grain Separator.

WISCONSIN: E. H. Pease Mfg. Co., Racine, one No. 2 Cornwall Corn Cleaner.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

SMALL ELEVATOR WANTED.

I want to rent a small elevator in Central West. Must be in good grain and hay country for making shipments East. Address

A. B. care Gibbs & Bro., No. 1 So. Front St., Philadelphia, Pa.

FOR EXCHANGE.

Good farm lands in Eastern South Dakota, well located and within 80 miles of Minnesota line, for good elevator located in Illinois or Iowa. Address

LOCK BOX 407, Delavan, Ill.

ELEVATOR WANTED.

I want to rent an elevator in corn and oat country; Central Illinois preferred. I will not answer anyone unless they state terms they want to lease on, capacity, kind of power, amount of grain handled during the past year, etc. Address

W. K. LUMSDEN, Monticello, Ill.



[Copy for notices under this head should reach us by the 13th of the month to insure insertion in the issue for that month.]

ATLAS ENGINE FOR SALE.

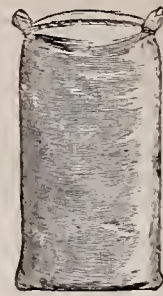
For sale, one 70-horse power Atlas Automatic Engine, in perfect order. Been run only three years. Address

SHANNON & MOTT CO., Des Moines, Iowa.

FOR SALE.

Two Grain Elevators; one in Hancock Co., and one in Henderson Co., Ill. In good grain country. Bargains. Address

F. E. WILSON, Yates City, Ill.



GRAIN BAGS—BURLAPS.

All kinds of Bags,
New and Second Hand.

ORDERS FILLED PROMPTLY.

W. J. JOHNSTON,

Factory and Office,
182 Jackson Street, CHICAGO.

E. R. Ulrich & Sons, SHIPPERS OF WESTERN GRAIN,

ESPECIALLY

High Grade White and Yellow Corn.

Elevators through Central Illinois on Wabash Ry., Chicago & Alton Ry., C. P. & St. L. Ry., and St. L. C. & St. P. Ry.

Main Office, 6th Floor, Illinois National Bank Building,

SPRINGFIELD, ILLINOIS.

Write for Prices Delivered.

ROOFING AND SIDING.

The Garry Iron and Steel Roofing Co.,

168 MERWIN STREET, CLEVELAND, O.,

MANUFACTURES



Steel Roofing,
Corrugated Iron,
Siding and Metal
Ceiling.

SEND
FOR CATALOGUE



DURABLE—EASILY APPLIED.

This roofing is manufactured from natural Trinidad asphalt materials, and will not dry up and become brittle under exposure to the weather as coal tar roofings do. Send for free sample of roof 12 years old, with circular and price list to

WARREN CHEMICAL & MFG. CO.,
56 Fulton St., New York, U. S. A.



Write us for Catalogue and Low Prices on best
STEEL ROOFING, CORRUGATED IRON, ETC.

We are large manufacturers of these goods and can save you money.

SYKES STEEL ROOFING CO.,
611 So. Morgan St., Chicago, Ill.,
and Niles, Ohio.



IRONTON, OHIO.

COMMISSION CARDS.

[We will not knowingly publish the advertisement of a bucket-shop keeper or irresponsible dealer.]

E. L. ROGERS & CO.,

ESTABLISHED
1863.

COMMISSION
MERCHANTS,

RECEIVERS AND EXPORTERS

GRAIN, Flour, Seed, Hay and Straw,

358 Bourse Building, PHILADELPHIA, PA.

Liberal advances made on consignments. Market reports furnished gratuitously on application. Correspondence solicited.

References: { Corn Exchange National Bank,
Manufacturers National Bank,
Merchants National Bank.

COMMISSION CARDS.**J. J. BLACKMAN** ASSOCIATED WITH **L. E. BUNKER****COMMISSION
MERCHANT.**Flour, Grain, Hay, Feed, Beans, Peas, Lentils,
Seeds, Corn Goods, Etc.

274 Washington Street, - - NEW YORK.

. W. RUNDELL. ESTABLISHED 1876. J. E. RUNDELL.

W. A. RUNDELL & CO.,

GRAIN AND SEED MERCHANTS.

MEMBERS TOLEDO PRODUCE EXCHANGE.

4 PRODUCE EXCHANGE, TOLEDO, OHIO.

Grain, Clover and Timothy Seed, Mill Feed, Baled Hay and Straw, Beans.
We solicit orders and consignments. Will buy your track or delivered
Toledo. We also solicit orders for the purchase and sale of futures in
grain and clover seed.

H. B. SHANKS. Established 1873. S. H. PHILLIPS.

Shanks, Phillips & Co.,**COMMISSION MERCHANTS,**

HAY, CORN, OATS, BRAN, CHOPS, FLOUR AND CORN MEAL.

306 Front St., Memphis, Tenn.

Refer to Union and Planters' Bank. Cash advances on B. of L.

**F. H. PEAVEY & CO.,**

Minneapolis.

GRAIN RECEIVERS.

Minn.

Consignments Solicited.

MILLING WHEAT A SPECIALTY.

E. A. GRUBBS. CONRAD KIPP.

E. A. GRUBBS GRAIN CO.,**Commission Grain and Hay,**

ROOM 9 CHAMBER OF COMMERCE,

Cincinnati, Ohio.

ASK FOR OUR PRICES.

SHIP YOUR GRAIN

—TO—

P. B. & C. C. MILES,**COMMISSION MERCHANTS,**
PEORIA, ILL.

Established 1875.

LIBERAL ADVANCES
QUICK RETURNS.REFERENCEES:—Commercial Nat. Bank, Peoria Savings, Loan &
Trust Co., Peoria.**M. F. BARINGER,**

...SUCCESSOR TO...

J. R. TOMLINSON & CO.**...GRAIN AND MILL FEED...**

416-418 Bourse Bldg., Philadelphia, Pa.

Correspondence with millers and grain dealers solicited. Sight
draft with bills of lading attached honored on all shipments.

B. WARREN. B. WARREN JR.

WARREN & CO.,**Grain Commission Merchants,**

ROOMS 7 AND 9 CHAMBER OF COMMERCE,

Peoria, Ill.

Leavitt, Sanborn & Co.,704 Chamber
of Commerce,
Boston, Mass.**HAY COMMISSION**Our market needs the BEST HAY. There is no money to
be made in poor goods. Correspondence solicited.Reference: T. G. Hiler, Cashier the Faneuil Hall National
Bank, Boston.**COMMISSION CARDS.****Martin D. Stevers & Co.***Commission Merchants,*

212 RIALTO BUILDING, - CHICAGO.

Established 1864.

We make a specialty of selling by sample

Barley, Wheat, Rye, Oats, Corn, Flax and Timothy Seed.

Grain, Seeds and Provisions for future delivery
bought and sold on margins.

LEMAN BARTLETT.

O. Z. BARTLETT.

L. Bartlett & Son,**GRAIN AND PRODUCE
COMMISSION MERCHANTS.****BARLEY A SPECIALTY.**Room 23 Chamber of Commerce Bldg
Milwaukee, Wis.

Careful attention given to orders from Brewers, Malsters and Millers

A. R. CLOUGH,**MILLER'S AGENT,****GRAIN AND MILL FEED,**

Board of Trade Rooms, Manchester, N. H.

Letters promptly answered. All sales direct.
I want a good Toledo corn account.**COLLINS & Co.,****STRICTLY COMMISSION****Grain, Hay and Mill Feed.****CINCINNATI, OHIO.**

WARREN R. BUCKLEY.

THOS. J. PURSLEY.

Buckley, Pursley & Co.,**GRAIN AND CLOVER SEED**

Commission Merchants,

PEORIA, ILL.

Grain, Hay and Seeds.

References: First National Bank, Peoria, Ill.; Commercial Na
tional Bank, Peoria, Ill.; and Mercantile Agencies.**THEO. MCGINNIS,****COMMISSION MERCHANT,**

Grain, Hay, Feedstuffs,

OFFICE, 524 POYDRAS STREET, NEW ORLEANS, LA.

Consignments solicited. Reference, Teutonia Bank.

ESTABLISHED 1867.

Reference: DUQUESNE NAT. BANK.

Daniel McCaffrey's Sons,
HAY, GRAIN AND FEED.**CONSIGNMENTS SOLICITED.**

PITTSBURG, PA.

ESTABLISHED 1879.

LEDERER BROS.,
GRAIN and SEED

Commission Merchants,

BALTIMORE, - - MDWe give careful attention to every shipment, are always pre-
pared to make cash advances on consignments. We make a
specialty of handling spot goods, which we either sell after ar-
rival or hold if requested. We solicit your trade as we do a strictly
commission business. REFERENCES: Merchants National Bank,
Baltimore, Md., and the Commercial Agencies.**COMMISSION CARDS.**

ESTABLISHED 1865.

L. EVERINGHAM & Co.,
Commission Merchants.

ORDERS AND CONSIGNMENTS SOLICITED.

GRAIN AND SEEDS OF ALL KINDS

For Cash and Future Delivery.

Suite 80 Board of Trade, - - CHICAGO, ILL.

L. F. Miller & Sons,

RECEIVERS AND SHIPPERS OF

GRAIN, FEED, SEEDS, HAY, ETC.

OFFICE 2933 N. BROAD ST., PHILADELPHIA, PA.

CONSIGNMENTS SOLICITED.

ELEVATOR AND WAREHOUSE, GERMANTOWN JCT., P. R. R.

References: { Manufacturers National Bank, Philadelphia, Pa
{ Union National Bank, Westminster, Md.**EDWARD P. MERRILL,**

Millers' Agent.

Flour, Grain and Mill Feed.

OFFICE:

21-2 Union Wharf, PORTLAND, MAINE.

No consignments wanted. I want a Feed Account from a
Letters Promptly Answered. good Winter Wheat Mill.**Rosenbaum Brothers,**
COMMISSION MERCHANTS

Receivers and Shippers.

GRAIN AND SEEDS.ROOM 77 BOARD OF TRADE BUILDING,
CHICAGO.

J. F. ZAHM.

F. W. JAEGER.

F. MAYER.

ESTABLISHED 1879.

J. F. ZAHM & CO.,

GRAIN AND SEEDS,

TOLEDO, OHIO.

SEND FOR OUR RED LETTER. . .

TOLEDO, OHIO.

BUFFALO, N. Y.

CHURCHILL & CO.,
GRAIN MERCHANTS.TOLEDO IS THE BEST MARKET FOR WINTER WHEAT AND
CLOVER SEED. BUFFALO FOR CORN AND OATS.Ask us for bids your track for grain based on Toledo or
Buffalo weights and grades. We will sell grain on commis-
sion in either market and make
liberal advances.**Correspondence Solicited.****GEO. N. REINHARDT & CO.**

MELROSE STATION, NEW YORK CITY.



We sell on Commission and buy direct,

HAY, GRAIN AND FEED.Storage capacity 8,000 bales, 30,000 bushels
Let us know what you have to offer.

A GRAIN SPOUT

That will load cars without shoveling. It is worth its weight in gold. It will save you in labor all it costs in less than a month.



Send for Prices to

H. SANDMEYER & CO.,

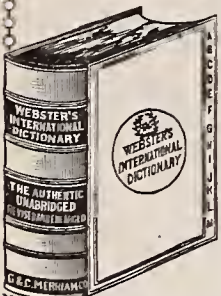
...PEORIA, ILL...

**Dust Protector.**

The "Perfection" has an improved Automatic Valve, which gives perfect protection and ventilation. Neatest. Handiest. Best. Nickel plated protector, postpaid, \$1. Agents wanted. Address H. S. COVER, So. Bend, Ind.

Webster's International Dictionary

Successor of the "Unabridged." The One Great Standard Authority, So writes Hon. D. J. Brewer, Justice U. S. Supreme Court.



Standard of the U. S. Gov't Printing Office, the U. S. Supreme Court, all the State Supreme Courts, and of nearly all the Schoolbooks.

Warmly Commended by State Superintendents of Schools, College Presidents, and other Educators almost without number.

Invaluable in the household, and to the teacher, scholar, professional man, and self-educator.

THE BEST FOR PRACTICAL USE.

It is easy to find the word wanted.
It is easy to ascertain the pronunciation.
It is easy to trace the growth of a word.
It is easy to learn what a word means.

The Chicago Times-Herald says:— Webster's International Dictionary in its present form is absolute authority on everything pertaining to our language in the way of orthography, orthoepy, etymology, and definition. From it there is no appeal. It is as perfect as human effort and scholarship can make it.—Dec. 14, 1885.

GET THE BEST.

Specimen pages sent on application to G. & C. MERRIAM CO., Publishers, Springfield, Mass., U.S.A.

INCORPORATED 1885.

CAPACITY, 1,206,000 BUSHEL.

The Cincinnati, Hamilton & Dayton Railroad Elevator Co.

ROOM 15 PRODUCE EXCHANGE

TOLEDO, OHIO.

Rates for Elevating and Storage of Grain.

"SEASON OF 1897 AND 1898."

Until further notice, on all sound grain, our elevating charges, including storage for ten days or any part thereof, are one-half of a cent per bushel, and for each succeeding ten days or any part thereof, a storage charge of one-fourth of a cent a bushel.

Having very large storage capacity, we are making the following exceedingly low rates for storage of grain of all grades, except on No. 4 corn, which will be customary charge.

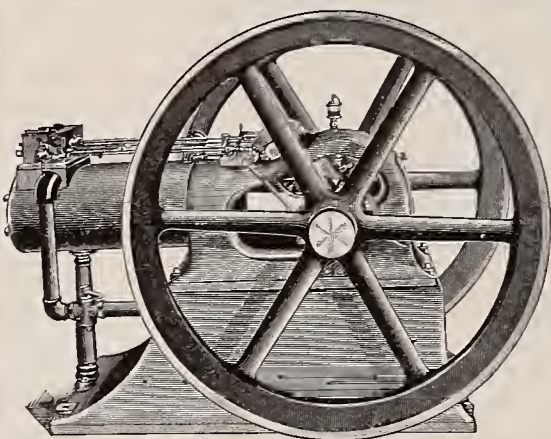
For winter storage (exclusive of elevating charges), from October 1, 1897, to May 5, 1898, inclusive, the same as the summer rate, except in cases where storage has accumulated, as follows:

ON AND AFTER

Oct. 1, 1897, to.....2½c. a bu.	} After which there will be no further storage charge until and including May 5, 1898.
Nov. 1, 1897, to.....2¼c. a bu.	
Dec. 1, 1897, to.....2c. a bu.	

T. E. FERGUSON,

Secretary.



The Dayton Gasoline Engines.

2 TO 50 H. P.

Manufactured by

THE DAYTON GAS ENGINE & MFG. CO.,
DAYTON, OHIO, U. S. A.

The Illinois Seed Co.

ALEX. RODGERS, PRESIDENT.
SEED MERCHANTS,
CORNER 15TH AND JOHNSON STREETS, STATION "H," CHICAGO.
If you wish to buy or sell field seeds correspond with us.

THE ROBINSON TELEGRAPHIC CIPHER SAVES 80% OF YOUR TELEGRAPH BILL.

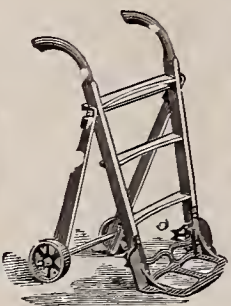
IN GENERAL USE BY MILLERS, GRAIN AND PROVISION DEALERS, ETC., ETC.

Revised edition now ready, containing fifteen additional pages, including Quotations, Railroads, Grades of Grain, Mill Feed, Hay, phrases to meet the present demands of the trade; Bids, Acceptances, Billing, Shipping Instructions, Etc.

Price unchanged. Leather and Gilt, \$2.00. Cloth binding, \$1.50.

S. L. ROBINSON, 510 Rialto Building, CHICAGO.

Trucks and Sack Holders.

**Improved Trucks**

Combination Truck and Step-Ladder, and Single Trucks, Sack Holders and Stand.

Best Boiler Compound recipe, the right to manufacture and use, with instructions. Price.....\$1.00

Combination Truck and Step-Ladder and Single Truck for..\$3.00

Prices for larger number given. Write for prices and circulars. Circulars free.

PEERLESS MFG. CO., Springfield, Ohio.

DUST! DUST!

Gibbs' Patent Dust Protector is invaluable to operatives in every industry where dust is troublesome. It has been thoroughly tested for many years in every kind of dust and is the only reliable protector known. Perfect ventilation. Nickel plated Protector \$1, postpaid. Circulars free. Agents wanted.

Gibbs Respirator Co., 30-36 La Salle Street, - CHICAGO.

SUMMER Excursion Tickets to the resorts of Wisconsin, Minnesota, Michigan, Colorado, California, Montana, Washington, Oregon and British Columbia; also to Alaska, Japan, China and all Trans-Pacific Points, are now on sale by the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY. Full and reliable information can be had by applying to Mr. C. N. SOUTHER, Ticket Agent, 95 Adams Street, Chicago.

PRICE REDUCED 66 PER CENT.

Cawker's American Flour Mill and Elevator Directory.

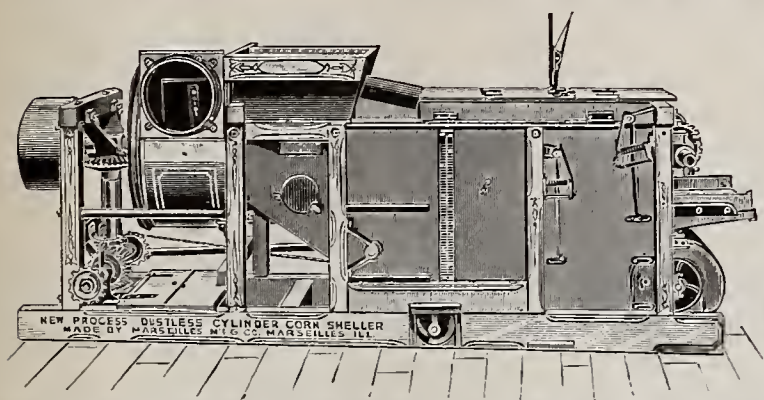
FORMER PRICE, \$10.00.

PRESENT PRICE, \$3.50.

We have a limited number of Cawker's American Flour Mill and Elevator Directory on hand, which we will sell at \$3.50 per copy. They will not last long at this price, so speak quick if you want one. We will furnish a copy of the Directory and a year's subscription to the AMERICAN ELEVATOR AND GRAIN TRADE for \$4.50.

Address **MITCHELL BROS. CO.,** 184 and 186 Dearborn St., CHICAGO, ILL.

The New Process Warehouse Corn Sheller.



Something New

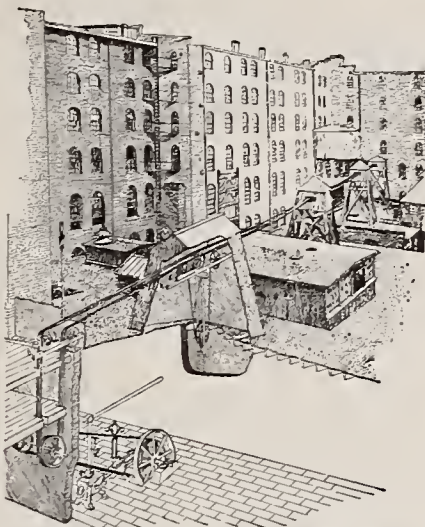
The
Latest
Improvements

Specially built for
the Elevator and
Grain Trade.

A NEW PROCESS OF SHELLING CORN.

Some of the special features are: An Adjustable Cylinder, White Iron Shelling Parts, Spiral Shelling Head, Double Suction and Blast Fans, Positive Screw Feed, no Clogging, no Grinding of Corn, Cobs Left in Good Shape for Fuel, no Waste of Grain or Power. Address

MARSEILLES MFG. CO., MARSEILLES, ILL.



150 H. P. Outdoor Rope Drive Installed
1891 at Plant of Michigan Stove
Co., Detroit, Mich.

MANILA ROPE POWER TRANSMISSIONS

OF ANY HORSE POWER DESIGNED
AND ERECTED.

SHAFTINGS, PULLEYS, GEARINGS. SHAFT
BEARINGS, FRICTION CLUTCHES CARRIED IN
STOCK.

GRAIN TRIPPERS, CAR MOVERS, GRAIN
SHOVELS, WAGON DUMPS, ELEVATOR BUCK-
ETS, BOOTS AND BOLTS.

LINK-BELT MACHINERY CO.,

ENGINEERS, FOUNDERS, MACHINISTS,
CHICAGO, U. S. A.

Conveying, Elevating and Power-Transmitting Machinery

H. W. CALDWELL & SON CO.

SPECIALTIES FOR MILLS AND GRAIN
ELEVATORS.

GENERAL MACHINISTS,

127, 129, 131, 133 West Washington St.

CHICAGO.

CALDWELL STEEL CONVEYOR.

Manufactured exclusively by us at Chicago, with latest improvements.



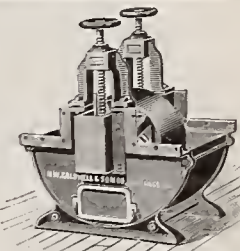
CALDWELL CORRUGATED SEAMLESS
STEEL ELEVATOR BUCKETS.

LINK BELTING.
SPROCKET WHEELS.
COTTON BELTING.
RUBBER BELTING.
LEATHER BELTING.
BELT CLAMPS.
POWER GRAIN SHOVELS.
ELEVATOR BOLTS.
ELEVATOR BUCKETS.
CONCRETE MIXERS.

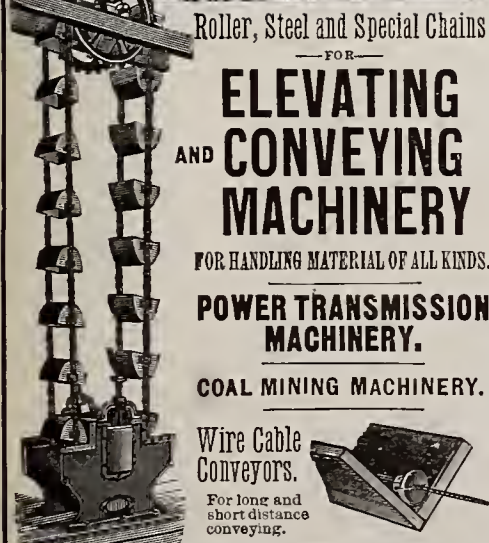
FRICTION CLUTCHES.
JAW CLUTCHES.
COUPLINGS.
FLEXIBLE SPOUTS.
GEARING (all kinds).
GRAIN SCOOPS.
ELEVATOR BOOTS.
COWELL MILLS.
HANGERS.
PERFORATED METALS.

PILLOW BLOCKS.
IRON PULLEYS.
WOOD PULLEYS.
SHAFTING.
SET COLLARS.
SWIVEL SPOUTS.
TAKE-UP BOXES.
TURN HEAD SPOUTS.
WIRE CLOTH.

Elevator
Boot.



JEFFREY



Roller, Steel and Special Chains

FOR— ELEVATING AND CONVEYING MACHINERY

FOR HANDLING MATERIAL OF ALL KINDS.

POWER TRANSMISSION MACHINERY.

COAL MINING MACHINERY.

Wire Cable
Conveyors.

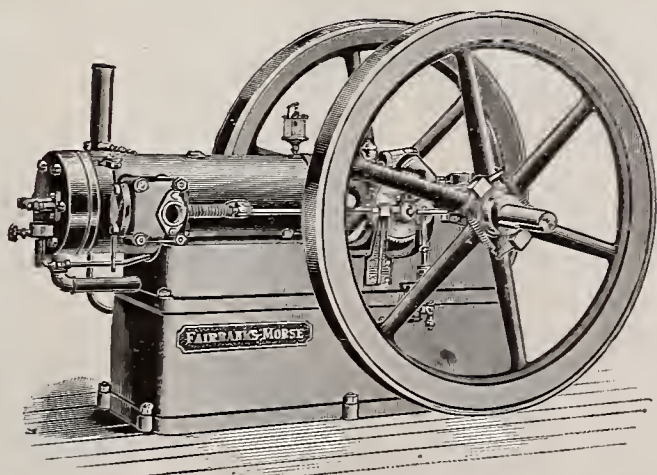
For long and
short distance
conveying.

THE JEFFREY MFG. CO. 163 Washington St.
Columbus, Ohio. NEW YORK.
Send for Catalogue.

FAIRBANKS-MORSE Gasoline Engines

• • ARE LIKE • •

**FAIRBANKS SCALES,
Standard,
Durable,
Reliable.**



Thousands of the Scales and hundreds of the
Engines are used by the GRAIN TRADE.

**FAIRBANKS, MORSE & CO.,
CHICAGO.**

St. Louis, Minneapolis, Cincinnati, Cleveland, Kansas City, Indianapolis, Louisville, Omaha,
Portland, Ore., St. Paul, Denver, San Francisco, Los Angeles.

Send for Special Catalogue "G" showing plans for placing Engines in Elevators, Flour and Feed Mills, etc.

James Stewart & Co.,

ENGINEERS AND
CONTRACTORS FOR

Frame or Steel GRAIN ELEVATORS,

Railroad Work and Heavy Structures.

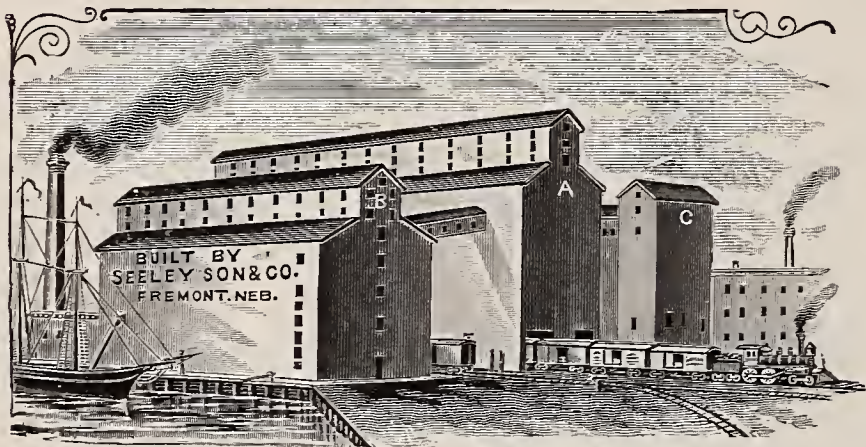
WE ALSO DESIGN AND BUILD PNEUMATIC *and* FLOATING ELEVATORS.

St. Louis and Buffalo.

We have built every elevator in New Orleans and Galveston. Also every elevator on the remaining Gulf Coast excepting one small one within the past twenty years.

SEELEY, SON & CO.,

Fremont, Neb.



Architects and Builders

OF ALL KINDS OF

GRAIN ELEVATORS.

WM. GRAVER TANK WORKS

MANUFACTURERS AND BUILDERS OF

Steel Storage Tanks

AND

STEEL ELEVATORS.

We Build Storage for Any Commodity
of Any Capacity.

GENERAL OFFICES:

790 OLD COLONY BUILDING, = CHICAGO.



D. A. ROBINSON

Main Office: Auditorium Annex, Chicago.

Construction Office: Great Northern Steamship Docks, Buffalo, N. Y.



Designer and Builder of

GRAIN ELEVATORS, MALT HOUSES

And all kinds of Heavy Construction.

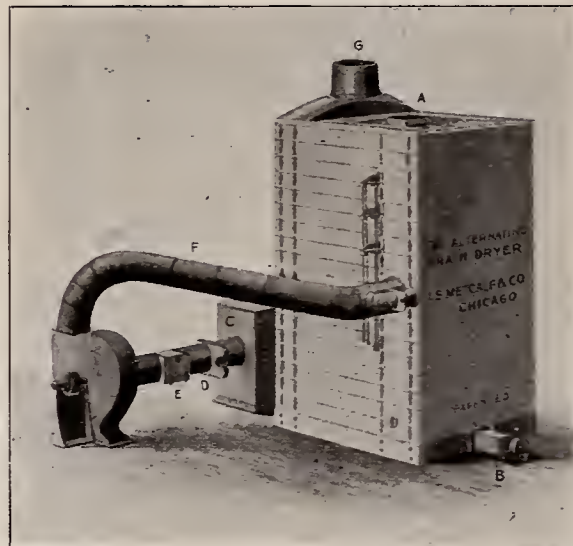
Patent System of Independent
Leg Rope Drive.

Patent Double-Jointed
Distributing Spouts.

Patent Automatic
Grain Belt Tripper

A PERFECT GRAIN DRYER.

Wet or Damaged Grain Restored to Grade.



WRITE FOR DESCRIPTIVE CIRCULAR.

JOHN S. METCALF & CO.,

Engineers,
Grain Elevator Builders,

1075 WEST 15TH STREET, - - CHICAGO.



GEO. M. MOULTON,
President.

THEODORE STARRETT,
Vice-President.

W. C. ENGLER,
Secretary.

J. M. WITHERSPOON,
Superintendent.

MOULTON-STARRETT CO.,

FISHER BUILDING, CHICAGO,

SUCCESSORS TO J. T. MOULTON & SON,

THE PIONEERS IN

GRAIN ELEVATOR CONSTRUCTION.

Architects and Builders of
Frame and Steel Grain Elevators.

THE BARNETT & RECORD COMPANY

DESIGNERS AND BUILDERS OF

Grain Elevators, Mills, Breweries and Malt Houses.

STEEL ELEVATORS A SPECIALTY.

We also contract to build complete all kinds of heavy structures, such as Docks, Packing Houses, Public Buildings, Stock Yards, Etc., Etc.



A Few Elevators Built by Us. Bu. capacity.

Portland El. Co., Portland, Me.	1,000,000
Maple Leaf Elevator, Kansas City, Kan.	1,000,000
Burlington Elevator, St. Louis	1,300,000
Interstate Elevator Co., Minneapolis	1,000,000
Northern Grain Co., Manitowoc, Wis.	500,000
W. W. Cargill, Green Bay, Wis.	500,000
Vigo Elevator Terre Haute, Ill.	500,000
Belt Line Elevator Co., Superior, Wis.	2,500,000
Superior Terminal El. Co., Superior, Wis.	2,500,000
F. H. Peavey & Co., Minneapolis No. 1	1,750,000
F. H. Peavey & Co., Minneapolis No. 2	500,000
Atlantic Elevator Co., Minneapolis	600,000
Empire Elevator Co., Minneapolis No. 1	600,000
Empire Elevator Co., Minneapolis No. 2	500,000

THE BARNETT & RECORD CO. has designed and built more than one thousand elevators with capacities varying from 20,000 to 2,500,000 bushels. Also a large number of docks, mills court houses, packing houses, hotels, the Cozad irrigation canal and other like improvements. As a result of this large experience, it has a thorough, first-class organization and equipment, enabling it to submit bids or execute work in the shortest time consistent with thoroughness

WRITE US FOR ESTIMATES.

604 CORN EXCHANGE, MINNEAPOLIS, MINN.

CHICAGO OFFICE, 541 ROOKERY.

TROMANHAUSER BROS.,

ARCHITECTS, CONTRACTORS, AND BUILDERS OF

GRAIN ELEVATORS.

COUNTRY, TRANSFER, MIXING, MARINE, AND
TERMINAL STORAGE ELEVATOR PLANTS.

Plans Submitted and Estimates Furnished.

315 New York Life Building, . . . MINNEAPOLIS, MINN.

THE INK

WITH WHICH THIS PUBLICATION IS PRINTED
IS MADE BY THE
QUEEN CITY PRINTING INK CO.
SOUTH ST. CINCINNATI, O.

Macdonald Engineering Company,

CONTRACTING ENGINEERS,

Designers and Builders of Wood and Steel

GRAIN ELEVATORS

Any Capacity.

1454, 1455 and 1456 Monadnock Block, Chicago, Ill.

E. LEE HEIDENREICH,
Consulting Engineer.

DESIGNER AND
ARCHITECT FOR

GRAIN ELEVATORS

In Wood, Steel or Cement Construction.

ESTIMATES FURNISHED.
FIRE LOSSES ADJUSTED.

541 ROOKERY,
CHICAGO.

THE INCLINE ELEVATOR and DUMP



The farmer furnishes the power. Less than one-half the investment and one-quarter the expense of operating an ordinary elevator. Unexcelled for convenience and economy in handling ear corn as well as shelled grain, etc.
The Incline Elevator and Dump and plan of building have been greatly improved and are covered by U. S. patents. Write for prices and circulars.

H. KURTZ & SON, GREENFIELD, IOWA.



WHEN YOU WANT
Elevator or Mill
Supplies,

Cleaning Machines,
Feed Mills,
Corn Shellers,
Engines and Boilers,
Gasoline Engines,
Horse Powers,

WRITE TO

GREAT WESTERN MANUFACTURING CO.

General Office and Factory, LEAVENWORTH, KAN.

Warehouse and Salesrooms, 1221-1223 Union Ave., KANSAS CITY, MO.

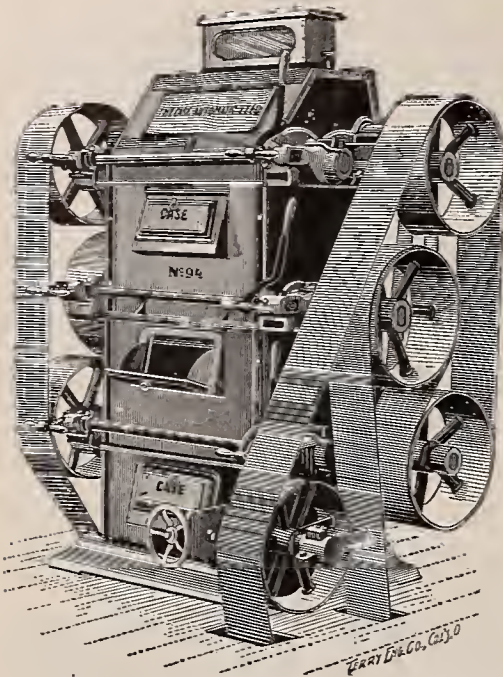
SEND FOR OUR ILLUSTRATED CATALOGUE.

Elevator Men,

Who put in a ROLLER FEED MILL last season, found it a profitable investment. Some Roller Feed Mills put in by elevator men have more than paid for themselves in one season. The demand for ground feed during the coming season promises to be even greater than during the last.

The Case Three-Pair High Corn and Feed Roller Mills

Are made in four sizes, and always do perfect work.



ONTARIO, IND., April 8, 1895.
The Case Manufacturing Co.,
Columbus, Ohio.

DEAR SIR:—We have the 9x18 Three-High roll running, and it is the best Feed Roll that I ever handled or saw. We can grind 60 to 65 bushels per hour with less than half the power that we used with the old stone.

She is a daisy. We have smiles all over our faces like a full moon. Now, if you want a statement regarding the roll, let me know, and will write you a good one. Everything all O. K.
Yours respectfully,
M. S. MILLER.

We Keep a Full Line of
**ELEVATOR AND MILL SUPPLIES
AND MACHINERY.**

Grain Cleaners, Corn Shellers, Corn Cleaners and Scourers.

CORN MEAL BOLTS.

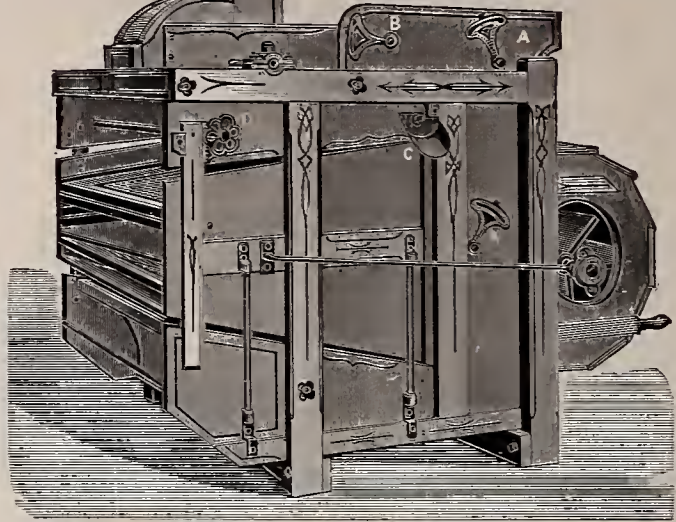
WRITE US FOR PRICES BEFORE BUYING.

THE CASE MFG. CO., COLUMBUS, OHIO.

THE CELEBRATED A. P. DICKEY GIANT GRAIN CLEANERS.

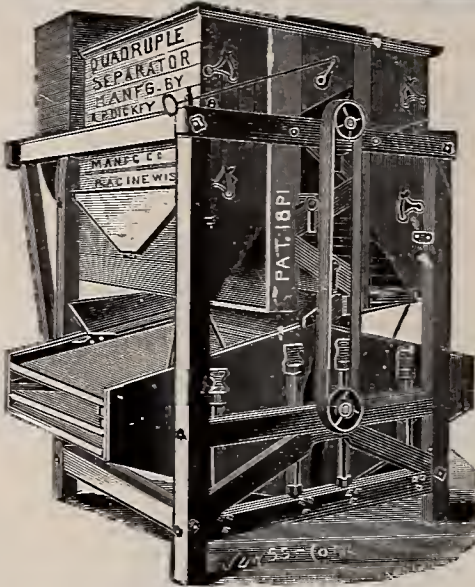
Over-Blast Suction Separator.

**THE
STANDARD
IN THEIR
LINE.**



**"Grain
Cleaned
to a
Standstill."**

Manufactured in any desired size and pattern, with capacities to accommodate the largest Elevator and Flouring Mills, or small Warehouses for hand use. Single and Double, End and Side Shake, and Dustless Separators, both Under and Over-Blast.



The Quadruple Suction Dustless Separator. Four separate suctions, independent of each other, with sieves and screens, requiring less power, less floor space, lower in height, needing less bracing, has better and more perfect separations, and furnished with the only perfect force feed and mixer on the market. Guaranteed to clean Grain to any desired standard without waste once through this machine twice as well as any machine made.

For CIRCULARS and PRICES address

A. P. Dickey Mfg. Co.

RACINE, WIS.

THE CONTINENTAL HOTEL

IS THE ONLY FIRST CLASS HOTEL IN THE IMMEDIATE BUSINESS AND AMUSEMENT CENTER OF THE CITY CONDUCTED ON THE

AMERICAN PLAN AT \$2.00 PER DAY
STEAM HEAT, PASSENGER ELEVATOR
AND OTHER MODERN CONVENIENCES.

TABLE AND SERVICE THE BEST

ROOMS NEWLY AND NEATLY FURNISHED. THE NEXT TIME YOU ARE IN CHICAGO TRY
THE CONTINENTAL, YOU WILL FIND IT HOMELIKE AND COMFORTABLE

CHAS. O. BLOOM

PROPRIETOR



WABASH AVENUE AND MADISON STREET.

CHICAGO, ILL.

THE SMITH PNEUMATIC TRANSFER AND STEEL STORAGE SYSTEM.

*Now in Successful Operation
at Toledo, Ohio.*

This is an entirely new and complete system for handling, treating and storing grain, seeds, millstuff, coal, sand, gravel, salt and other subdivided substances which can be handled in bulk, and the protection and preservation of cereals, seeds, vegetables, fruits, ensilage and fodder crops, cotton, wool and other fibers, tobacco, provisions and all perishable substances and valuable commodities in absolute safety from fire, water, air, storms, floods, microbes, insects, vermin, animals, thieves, evaporation, fermentation, oxidation or other causes of damage or destruction.

This system has nothing in common with other methods, but is entirely different and distinct, in construction, arrangement and operation, materials used, principles involved, and results obtained, from all others heretofore in use.

It is fully protected by 20 patents already issued, and others pending, in the United States and principal foreign countries.

It was on exhibition at the World's Columbian Exposition of 1893, and was awarded four highest medals and diplomas and received in addition thereto the highest indorsement of the principal officers of the Exposition as well as of the highest authorities in all industries to which it is applicable.

The title to all patents and other rights belonging to this system is vested in The Smith Pneumatic Transfer & Storage Co., and any infringement thereon will receive prompt attention.

The policy of the Company in regard to the introduction of its system is to make such liberal and easy terms with all who desire to use it that there will be no cause for complaint.

Full particulars furnished on application in person or by letter to

The Smith Pneumatic Transfer & Storage Co.,

1327 Manhattan Building,

315 DEARBORN ST., CHICAGO.

SEEDS

THE ALBERT DICKINSON CO.

Timothy, Clovers, Flax, Hungarian, Millets, Red Top, Blue Grass,
Lawn Grass, Orchard Grass, Bird Seeds, Ensilage Corn,
Pop Corn, Buckwheat, Field Peas, etc.

OFFICES, COR. CLARK & SIXTEENTH STS., CHICAGO, ILL



BELT CONVEYOR IN SOUTH CHICAGO ELEVATOR "C."

All Machinery Used in Elevators Furnished By

DODGE MANUFACTURING CO.,Send Specifications.
Write for Catalogue.

Mishawaka, Ind.

An Offer to Hay and Grain Men

THE AMERICAN ELEVATOR AND
GRAIN TRADE,

\$1.00 per year.

MONTHLY.

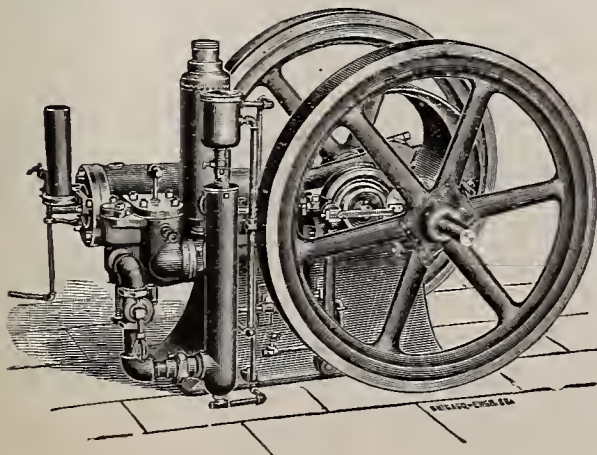
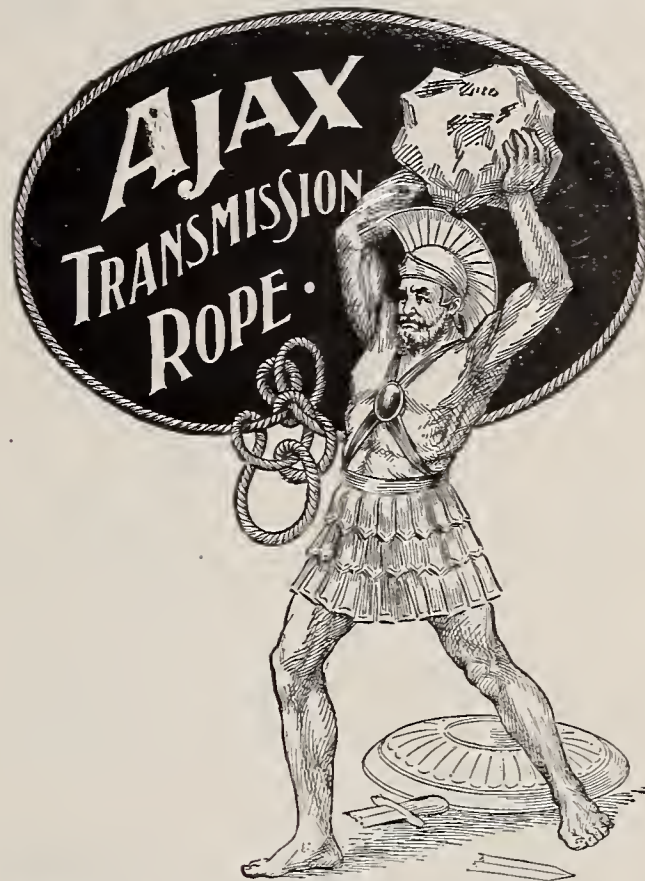
THE HAY TRADE JOURNAL AND
DIRECTORY,

\$2.00 per year.

WEEKLY.

BOTH FOR \$2.00.

ADDRESS EITHER

The Hay Trade Journal, OR Mitchell Bros. Co.,
Canajoharie, N. Y. 184 and 186 Dearborn St., Chicago, Ill.**Racine Gas and Gasoline Engines.****BOTH HOT TUBE AND ELEC-
TRIC SPARK IGNITION**Furnished with each engine. Ra-
cine engines are the result of
ten years' experience in the
manufacture of Gas and Gaso-
line Engines and embody only
such methods and devices as are
known to be the best for the
purpose.Simple in construction and op-
eration, extremely economical.Write for catalogue A and
net prices.**RACINE HARDWARE CO.,**
RACINE, WIS.We can furnish our Ajax Trans-
mission Rope in all lengths
and sizes desired.**H. CHANNON CO.,**
24-26 Market St., Chicago.**DAMP WHEAT can be PUT in CONDITION for
GRINDING or STORAGE**

By using our

**STEAM
DRYER,**Which is also a successful
Wheat Heater or Temperer
or Dryer for Washed
Wheat or Bran.It leaves the Wheat in Perfect Condition for the Rolls. Will also dry
Malster's, Brewer's and Distiller's Wet Grain.Not an Experiment. In successful use 25 years drying
CORN MEAL AND HOMINY,**BREWERS' GRITS AND MEAL,****BUCKWHEAT, RICE AND****ALL CEREAL PRODUCTS.****ALSO SAND, COAL DUST, GRAPHITE AND CLAY AND ORE OF ALL KINDS!**Automatic in operation, requiring no attention. Double
the capacity of any other Dryer sold for same price.**THE CUTLER CO., North Wilbraham, Mass.****THE OLD WAY.**For NEW and BEST Way
ADDRESS**UNION IRON WORKS,****DECATUR, ILL.,**

Manufacturers of the CELEBRATED

Western Shellers and Cleaners

The "Best in the World."

**Elevator Supplies of All Kinds a
Specialty.**We are the Pioneer Elevator Builders of the
West, and claim priority in the building of
Cheap Elevators with Increased Conveniences.
Don't BUILD until you get our Plans and Prices.**Write for Catalogue.**

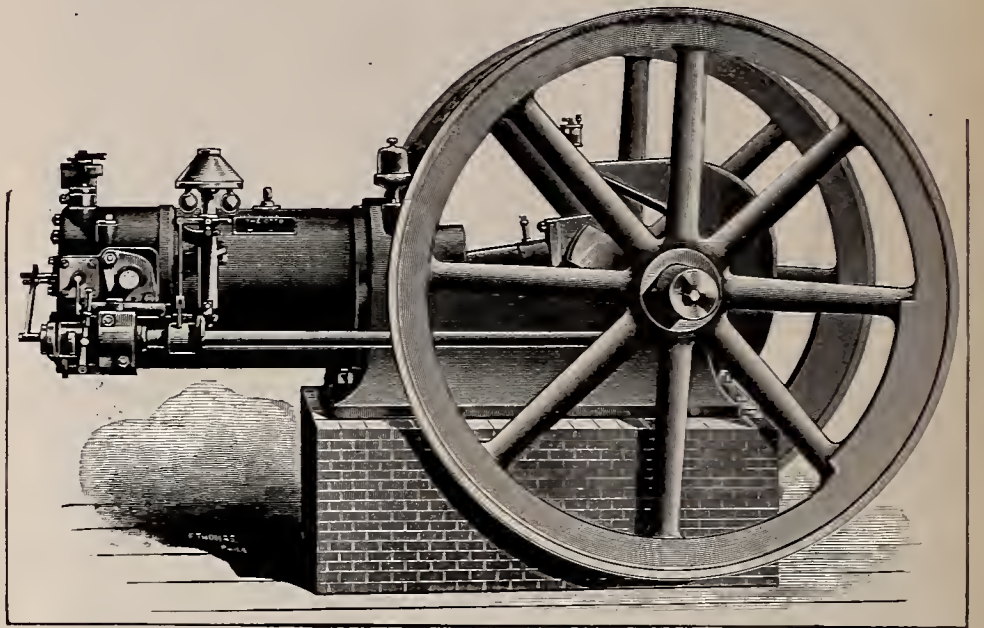
THE "OTTO" GASOLINE ENGINES.

STATIONARY, PORTABLE AND MARINE.

SIMPLEST IN CONSTRUCTION,
SAFEST AND EASIEST TO OPERATE,
SUREST TO GIVE SATISFACTION.

50,000 OTTO'S IN USE.

OFFICES: { 245 Lake Street, CHICAGO.
321 S. 15th Street, OMAHA.
212 Nicollet Avenue, MINNEAPOLIS.
35 E. Ohio Street, INDIANAPOLIS.



Factory: THE OTTO GAS ENGINE WORKS, PHILADELPHIA.

\$2.00 \$2.50 \$1.00



PUBLISHED THE FIRST DAY OF EVERY MONTH.

ESTABLISHED IN 1873.

The Best Exponent of Modern Milling.

SUBSCRIPTION PRICE,

\$2.00 PER YEAR.

Each number is worth the cost of an entire year's subscription to every man in the trade.

SEND FOR SAMPLE COPY.

ADDRESS

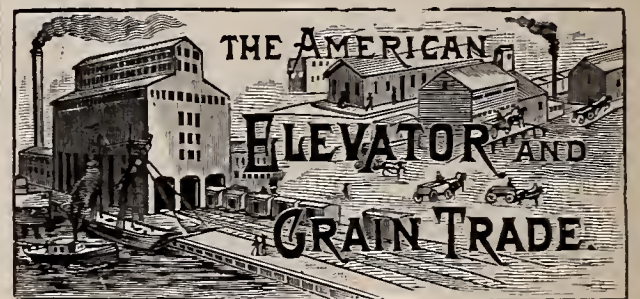
— FOR —

BOTH
FOR ONE YEAR.

You can get such value nowhere else for your money. Many readers want a paper that comes twice a month. THE AMERICAN MILLER and THE ELEVATOR are offered at less than such a paper could be given for. You need them both in your business.

\$2.50

Two Papers a Month.



PUBLISHED THE FIFTEENTH OF EVERY MONTH.

ESTABLISHED IN 1882.

Subscription Price, Only \$1.00 Per Year.

Each Number Contains 44 Pages of Valuable Matter.

THE AMERICAN ELEVATOR AND GRAIN TRADE is the only paper of its class in the field.

Mitchell Bros. Co.

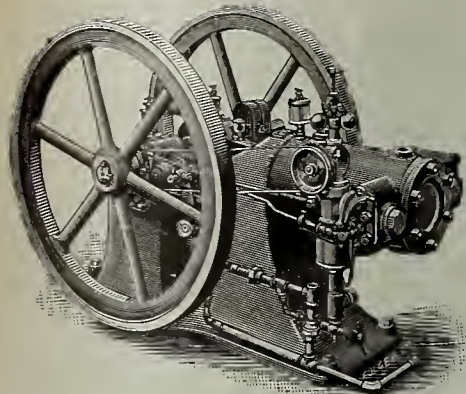
PUBLISHERS,

184 & 186 Dearborn St., CHICAGO, ILL.

SEEDS

Grain, Clover and Grass Seeds,
CHAS. E. PRUNTY,
MAIN & MARKET SAINT LOUIS.

THE SUMNER GAS AND GASOLINE ENGINES.



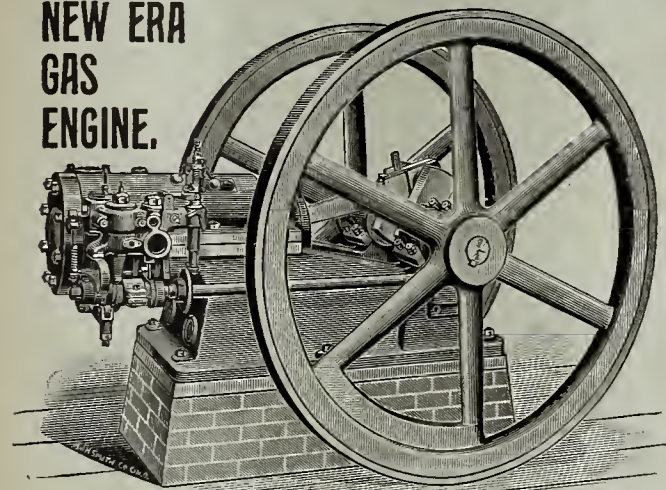
The NEW IMPROVED SUMNER ENGINE is up to date in every respect. It is not excelled in any particular by any engine on the market. In several important points it leads all others. One of the most important of all is its Electro Magnet for the Explosion of Gas. Satisfaction guaranteed and each Engine warranted. Get our prices and we will get your business. Correspondence solicited.

THE F. M. WATKINS CO.,
MANUFACTURERS,
S. E. Cor. Baymiller and Sixth Sts.,
CINCINNATI, O.

Northwestern Agent: C. A. Ames, 405 Sixth Ave. South, Minneapolis, Minn.

"NEW ERA" GASOLINE ENGINE.

NEW ERA
GAS
ENGINE.



Easy to Start.
Easy to Operate.
Vertical Poppet Valves.
Electric or Tube Igniter.
Any working part removed for cleaning or repairing without disturbing other parts.
Heavy and substantial. First class throughout.
Thoroughly Guaranteed.

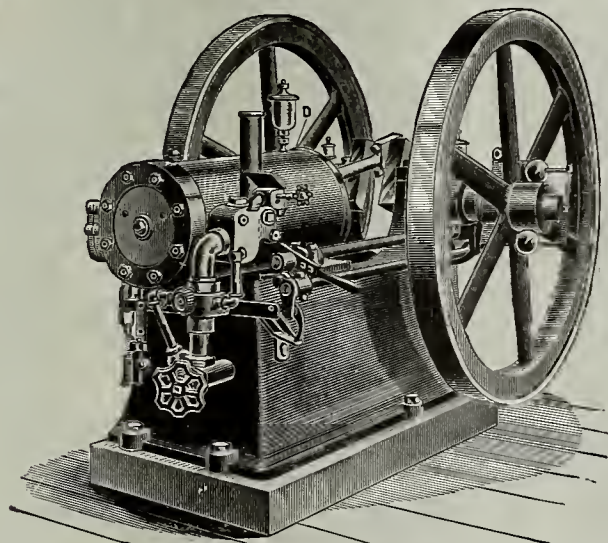
Sizes 5 to 60 H. P.

For Catalogue and Prices address
NEW ERA IRON WORKS, 30 WAYNE AVE., DAYTON, OHIO.

THE LATEST WEBSTER HORIZONTAL ENGINE

CAS

CASOLINE



WEBSTER MANUFACTURING COMPANY,
SOLE MAKERS,
1077 WEST 15TH ST., CHICAGO.
Write for handsome new catalogue.

NEVER A PEER



The Salem Bucket has had imitators, but most ever claimed by competing buckets is that they "are as good as the Salem." We fixed the standard to which others aspired, but the Salem is now, as it always has been, incomparably the

BEST BUCKET MADE.

The BEST is what you want. It is the cheapest and most satisfactory in the end. Besides, the Salem is sold as low as other buckets.

ALL KINDS OF SHEET AND PLATE METAL WORK.
THE W. J. CLARK CO., Salem, Ohio, U. S. A.

Hicks Improved Gas and Gasoline Engines.

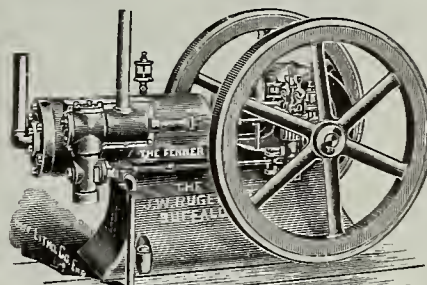
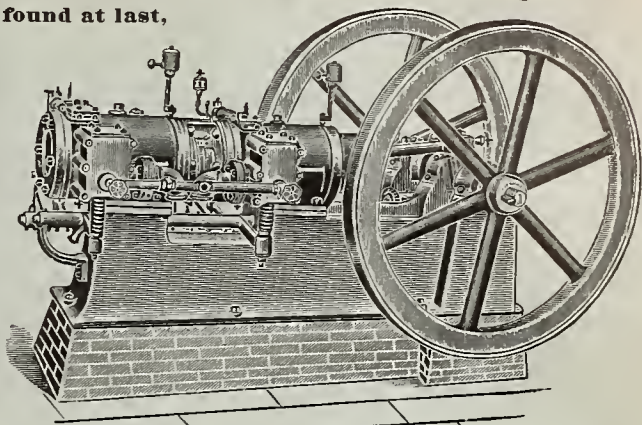
The long-sought-for found at last,
AN IMPULSE WITH EVERY
TURN OF THE CRANK,

Thereby doubling the power of the engine and insuring a perfect steady motion, adapted to all kinds of work, especially where steady and reliable power is required, such as electric light and mill work. Every engine guaranteed to work as represented, and to be the best of its kind on the market.

Send for catalogue and prices to the

FRONTIER IRON WORKS

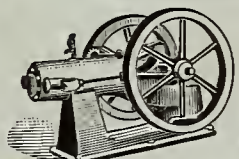
(Sole Manufacturers),
Detroit Gas Engine Co.,
DETROIT, MICH.



5 H. P.

The J. W. Ruger Mfg. Co.,

214-222 Chicago Street,
Buffalo, N. Y.



GASOLINE ENGINES

Are the best and cheapest power for Elevators, Conveyors, Feed Mills, Corn Shellers, Etc. Catalogue Free.

The Van Duzen Gasoline Engine Co.,
CINCINNATI, OHIO.



PROUTY Electro-Gasoline Engine

Runs without smoke, odor or noise. Special styles for Electric Lighting, Boats, Mining Locomotives, Hoists, Portable, Threshing, Pumping, Farm and Dairies, Inspection and Street Cars, Road Wagons, Printing Offices and all stationary purposes. All engines guaranteed and may be returned at our expense if not as represented. **THE PROUTY CO.,** 79 Dearborn St., CHICAGO, U.S.A.

FOOS GAS AND GASOLINE ENGINES

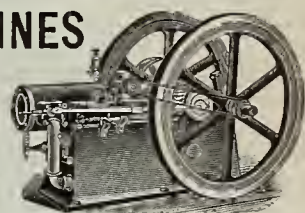
ADAPTED FOR ALL PURPOSES USING POWER.

Excel for Electric Lighting, Flour and Feed Mills, Grain Elevators, Water Works, Irrigation, Mining, Shops, and all other uses requiring STEADY SPEED.

2 TO 250 H. P.

Write us before purchasing. New Art Catalogue free.

THE FOOS GAS ENGINE CO., Springfield, Ohio, U.S.A.

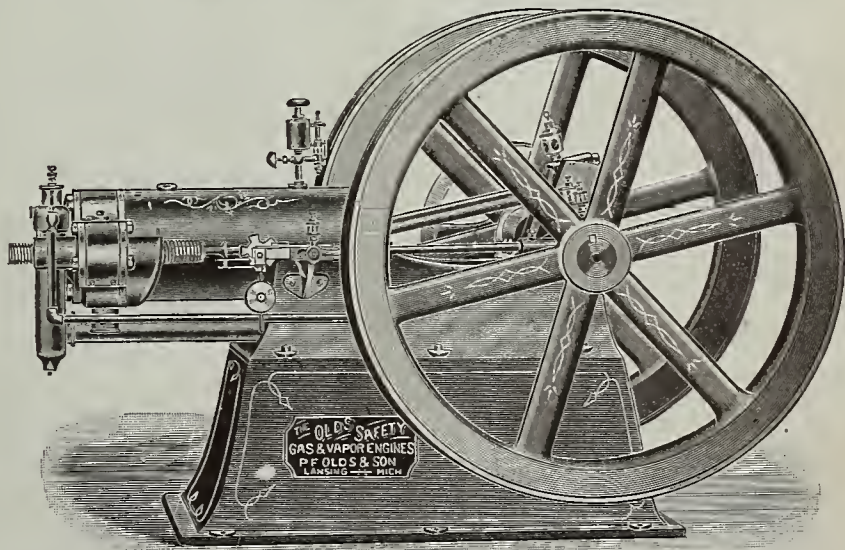


WHEN YOU ARE BUSY

BUY THE

OLDS Gas AND Gasoline ENGINE

It Gives no Trouble in Warm or COLD Weather.



Mixing device has no moving parts. The two poppet valves are operated in straight line by a plain eccentric. Mechanically correct. Indorsed by economists and the Michigan Millers' Insurance Co. Sizes 1 to 50 H. P. Self-Contained Upright Engines.

P. F. OLDS & SON,

The Gas Engine Builders,

Box 423, Lansing, Mich.



ELEVATING AND CONVEYING APPLIANCES.



Webster Spiral Conveyor,
Elevator Buckets,
Elevator Boots
Belt Conveyors,
Friction Clutches.



Power Grain Shovels,
Car Loading Spouts,
Rope Drives,
Gas Engines,
Chain Belting.



WEBSTER MFG. CO.



OFFICE AND WORKS: 1075-1097 WEST 15th ST., CHICAGO.



Gasoline go as far and **DO AS MUCH WORK** used in the

CHARTER

as five to twelve in other engines, for all its expansive force is utilized.

CHARTER GAS ENGINE CO., 400 Locust St., Sterling, Ill.

WAGON, HOPPER, PORTABLE AND DUMP SCALES.

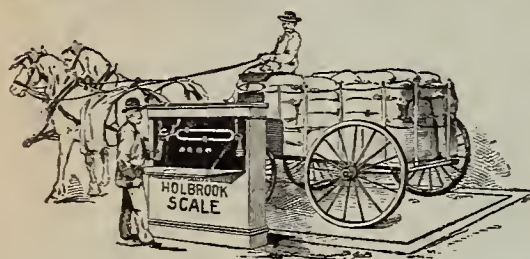
Elevator Machinery of Every Description.

WESTERN AGENTS FOR THE

Charter Gasoline Engines.

Write for prices. Address

C. D. Holbrook & Co.,
305 3d St. So., Minneapolis, Minn.



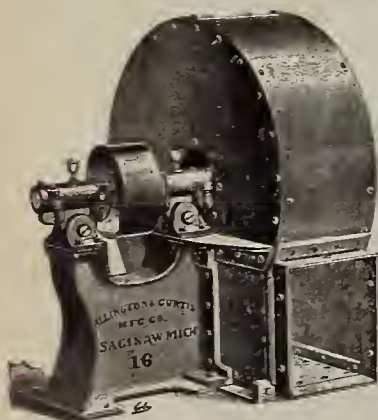
Fans and Dust Collecting Systems

FOR

Elevators.

COLLECT YOUR DUST AND SAVE EXPLOSIONS.

The Allington & Curtis Mfg. Co.
SAGINAW, MICH.



WELLER CONVEYOR.



Elevator Buckets,
Elevator Boots,
Power Grain Shovels,
Trippers,
Car Pullers,
Loading Spouts,
Belting, Etc., Etc.

Pulleys,
Rope Sheaves,
Shafting,
Hangers,
Clutches,
Sprocket Wheels,
Link Belting, Etc., Etc.

WRITE FOR GENERAL CATALOGUE NO. 12.

Estimates given on Complete Grain Elevator Equipments.

WELLER MFG. CO. Office: 118 and 120 North Avenue, Chicago.

MANUFACTURERS OF ALL KINDS OF BAGS

GRAIN BAGS

AND BAGS FOR MILLERS USE A SPECIALTY.
MILWAUKEE BAG CO. MILWAUKEE, WISCONSIN.

THE BEST ALL-AROUND FEED MILL

The conical burrs give large capacity with moderate power. Ahead of rolls or burrs in speed and quality of work for grinding all kinds of grain into first-class feed. Will crush corn and cob and grind oats, rye, barley, wheat, shelled corn, cottonseed, oil cake, etc. Has self-feeder for ear corn. The divided hopper makes it practical to grind oats, wheat or other small grain and crush ear corn at the same time, mixing the two in any proportion desired. Are sold with or without elevator attachment. Made in six sizes, ranging from 2 to 25 horse power. Get our latest circular.

Highest
Award
World's
Fair.



Gold Medal Atlanta Exposition.

YES, We still make
"Ready Dressed"
MILL COGS
and Bowsher's Speed
or Motion Indi-
cator and
Superior Hard Maple
Conveyor Flights.

THE N. P. BOWSHER CO., South Bend, Ind.

THE "HOWELL" POWER CORN SHELLER

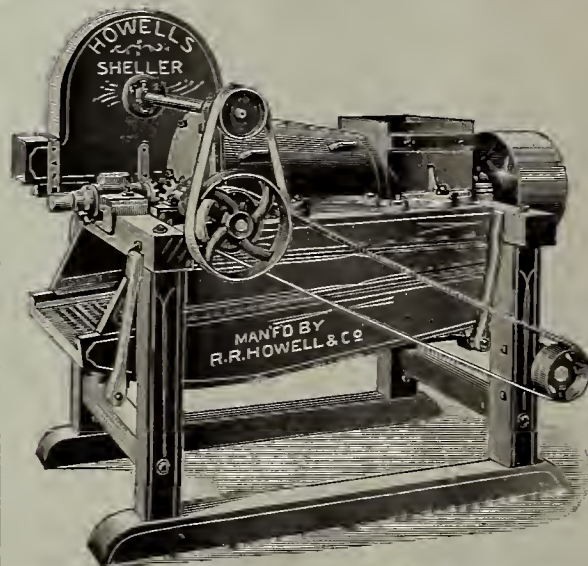
SHELLS the corn clean from the cob and cleans it perfectly.

Simple and durable.

Dustless, easily adjusted to suit the corn and can be changed to run in either direction. Chilled shelling surfaces. The best sheller in the market.

WRITE FOR PRICES

R. R. HOWELL & CO.,
MINNEAPOLIS, MINN.



GRINDING MILLS

This cut shows our **INVINCIBLE CRINDER**, the only mill made that grinds two kinds of grain at the same time. Our catalogue shows a full line of Elevator Machinery and Supplies and **17 DIFFERENT KINDS OF GRINDING MILLS.**

W. W. Stephens & Co.,
133-135 S. CLINTON ST., CHICAGO, ILL.

